Education and Culture

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Roehampton
University

Fontys Opleidingscentrum
Speciale Onderwijszorg

European Master/Magister

In

Special Education Needs

MA SEN/Mgr. (Special Education Needs) – Erasmus Mundus

Module Title:

DISSERTATION

Module code:

ERM030L003Y

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DECLARATION

This dissertation is submitted as a part of fulfillment for the Master Degree requirements of the European MA/Mgr. SEN Erasmus Mundus dissertation (2008-2009), at Roehampton University, London, UK; Charles University, Prague, Czech Republic; and Fontys University, Tilburg, the Netherlands.

I hereby Munira Sultan Al-Adawi declare that I have developed this dissertation independently with the use of the resources listed in the bibliography.
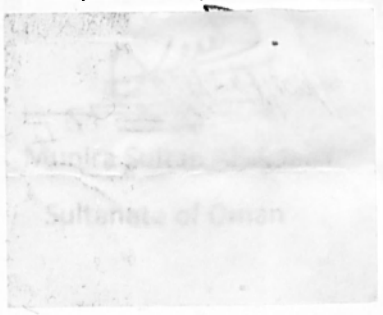
30 /7/2009

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Abstract

One can wonder if school practices can be considered as a good practice if teachers views were neglected, one can also imagine what it would happen if none of us agreed that different people learn differently according to their abilities, needs and circumstances. This case study evaluates the views and practices that language teachers held in one of the basic primary schools in Prague -Czech Republic- regarding the accommodations of the needs of students with dyslexia according to their preferred learning styles. The aim of this study was to explore the different issues, which are with and against the different theories of learning styles, according to the

about the practicality of putting some of these theories when it comes to meet the

Hence, as a reader you will be able to observe the ways and procedures that Czech language teachers follow in meet the needs of these students with dyslexia through the identification of their in their journey, their training needs, and most importantly their discrepancy of practices according to their knowledge, experiences and beliefs about learning styles. You will also be able to

use their own learning styles. At the end, you will be able to see how this study has added a lot to my knowledge about learning styles in meeting the needs of students with dyslexia, which is hoped to be shared with teachers of dyslexia and special needs in my home country Oman, and some recommendation of future practice has also been provided.

Keywords: Learning styles, Dyslexia, teachers' views.

TEACHERS' VIEWS IN ACCOMMODATING FOR THE LEARNING STYLES OF STUDENTS WITH DYSLEXIA IN CZECH LANGUAGE CLASSES

Abstract

One can wonder if school practices can be considered as a good practice if teachers views were neglected, one can also imagine what it would happen if none of us agreed that different people learn differently according to their abilities, needs and circumstances. This case study evaluates the views and practices that language teachers held in one of the basic primary schools in Prague -Czech Republic- regarding the accommodations of the needs of students with dyslexia according to their preferred learning styles. The aim of this study was to explore the different issues, which are with and against the different theories of learning styles, according to the latest researchers and most importantly to explore what practice has to say to us about the practicality of putting some of these theories when it comes to meet the needs of students with dyslexia.

Hence, as a reader you will be able to observe the ways and procedures that Czech language teachers follow to meet the needs of their students with dyslexia through the identification of their learning styles, the challenges that face them in their journey, their training needs, and most importantly their discrepancy of practices according to their knowledge, experiences and beliefs about learning styles. You will also be able to observe their views regarding empowering their students with dyslexia to know and use their own learning styles. At the end, you will be able to see how this study has added a lot to my knowledge about learning styles in meeting the needs of students with dyslexia, which is hoped to be shared with teachers of dyslexia and special needs in my home country Oman, and some recommendation of future practice has also been provided.

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Acknowledgements

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Chapter One: Introduction

Introduction

This chapter will provide the background of this current study and the reasons of choosing one of the controversial topics in the field of education, which is related to learning styles. Since until today little practical research had been done to prove the effectiveness of all the theories of learning styles, leading some researchers and educationalist to be against it, and others to be in favour of it, especially in dealing with students who have special needs like dyslexia. Hence, this study is about using learning styles (LS) to educate students with dyslexia in the city of Prague in Czech Republic. However, since my objectives are more related to my own personal experience, you will also observe the topic in relation to my professional background in my country Oman.

1.1 Background of the study

In the past few years many educationalist, psychologist and commercial agencies have spent time on providing various ways and theories on the way people learn. Many indicated that different people learn in different ways, and that teachers should change their method of teaching to suit their learners preferred Learning Styles (LS). Accordingly, teachers try to develop different ways to accommodate their students learning styles (Smith & Dalton, 2005). Others reflected on their practice in small case studies about the effectiveness of using LS to enhance the achievement of their learners and many of them believing that one theory works better than others. For example, Prashnig (2005) is in favour of using learning styles theories and it's instruments, as to her view it assess biological and conditioned styled features rather than assessing personality traits and intelligence factors . Similarly, the Head of the Division of 'Dyslexia, literacy and Learning Styles' at South Bank University in London Dr. Cooper (2004) pointed out that despite the fact that LS practitioners rarely publish their research, doing his own practical research in LS theories he found that they are very effective on enhancing the achievement of students with dyslexia.

Furthermore, one of the rare studies is the small scale study done by Exley (2003) who is a SENCO at Guilsborough school in Northampton in UK, though her study was criticized by Mortimore (2005) who argues that teachers should be very cautious in choosing specific LS instruments to assess the learners LS, her study indicated that using LS to empower students with dyslexia by knowing their LS improved the student's whole school experience. Therefore, it's significant to say that better understanding of theories and its ways of being effectiveness is one way of bringing awareness to those who don't really agree with the theories of (LS)

1.2 Motivations for my study

In year 2000 a project in catering for students with Learning Disability was introduced in Oman; this project was designed to cater for all students who have difficulty in reading, writing or arithmetic in mainstream schools including those who were later identified as having dyslexia. The project started in primary mainstream schools as a part of inclusive education. Hence, special trained teachers in the field of Learning Disability were provided to support students in the subject of language and mathematics at specific times of the day in their regular schools.

As years went by all primary schools and some secondary schools had learning disability teachers, leaving regular classroom teachers perceive those identified students as the duty of the special teacher. Since this issue was prevalent in many schools, the Ministry of Education raised the importance of working towards inclusion rather than integration and the decision was made to focus on training both special and mainstream teachers to cater for the needs of these students in their regular classes. The only way to achieve this was, to draw all teachers' attention during teacher training and in-service training, that catering for the different learning styles in the regular classrooms is one way to meet the different needs of different students regardless of their abilities and disabilities. This task wasn't easy on teachers nor on supervisors, who had to train teachers depending on their limited knowledge about the effectiveness of some (LS) theories in school practice.

Since I'm one of the supervisors for teachers who support students with Learning disability and dyslexia at the Department of Special Education Needs, one of my duties is to train teachers how to cater for the different needs of students with Dyslexia. Through my working years as a teacher for students with dyslexia then as a supervisor in 2004, it was clear to me that many supervisors train teachers in how to match their strategies according to one model which states that there are three (LS) for all students: visual, auditory and kinaesthetic learning styles without training them the ways of identifying their students' learning styles and how to make their students aware of their own learning styles.

Therefore, many teachers made effort in applying some of the theories of learning styles such as the "VAK" theory, which focuses on visual, auditory and kinaesthetic learning styles. Others even went along with commercial agencies which promotes the theory of Gardner "the Multiple Intelligence" theory. However, in 2006 as a part of 'Gulf Supervisors Internship' I visited a school in UAE which adopted their whole school curriculum and system to the theory of Gardner, this practice draw my attention to the issue of what made or convinced this school to buy the idea that this certain theory is better than the other many theories of learning styles. After this visit, some supervisors were impressed and willing to adopt such theory in our schools. That visit made me relies that many of our teachers and even us as supervisors don't have clear understanding of all these different theories and its implication in schools. It left us with only cut and past practices from European or nearby countries or even from commercial agencies. Hence, these issues acted as a strong motivation for me to want to know more about this field of learning styles, as this new knowledge will act as my support in training teachers in more scientific and systematic way, a way which will bring awareness about the truth behind all these theories and its practice implication.

1.3 Purpose of the study

While there is a lot of theoretical basis suggesting that teaching and learning styles influence the quality of learning, there has been little work on putting the ideas into practice based on scientific research. In addition, I have seen little written about how teachers put some of these theories into practice with students who have dyslexia, and why they choose one theory over another?

Therefore, the purpose of my study is to make use of a qualitative case study approach using qualitative and quantitative data collection methods such as questionnaires, interviews, classrooms observations, and literature review, as well as observing the school policy to achieve the following objectives:

1) To develop a deeper understanding about the awareness, beliefs and perceptions teachers have regarding the theories of learning styles and its implication in schools in relation to students with dyslexia.

2) To identify the extent in which teachers take account of the students preferred LS and using the theories of LS, and what encourages them to use such theories.

3) To identify the range of practices already taking place in school context, in catering for the needs of their students with dyslexia through identifying their learning styles and through empowering their students to use their own learning styles.

4) To find out the barriers that faces teachers on using the theories of LS.

Hence, my study will try to answer the following question:

How Czech language teachers in primary mainstream schools in Prague use learning styles to support students with dyslexia?

My Sub questions will be as follows:

- How Czech language teachers identify their students preferred learning styles?

- To what extent did the Czech language teachers take into account the preferred learning styles of students with dyslexia, and what teaching practices have been used?

- Where account has not been taken regarding identifying preferred LS what methods teachers use to develop teaching methods?

- How Czech language teachers involve students with dyslexia to know and use their preferred leaning styles?

- What are the barriers that face Czech language teachers in applying learning styles?

- What supports Czech language teachers in responding to their students preferred learning styles?

1.4 Context of study

According to Zelinkova (2009) the diagnosis of dyslexia in Czech Republic may result in placement of children under one of the multi-track school options:

- Mainstream school;
- Special class within mainstream school; and
- School for children with specific learning difficulties and behavioural problems

Following the aims of this study and in my believe that the best way that I can gain better understanding of Learning styles for students with dyslexia, is to conduct my study in an integrated setting in mainstream school comparable to our settings for students with dyslexia in Oman, by this way I will also have better chance of a pilot study. Therefore, the study was carried in one of the primary mainstream schools in the city of Prague in the Czech Republic.

Moreover, since the definition of dyslexia in Czech republic consist of students who have problems with language, the study was limited to the following participants the head-teacher, support teacher and language teachers to obtain information which answers the main question of this study starting from school policy on using learning styles, into what teachers think about their students learning styles and how do they implement it with students who have dyslexia

1.5 Significance of study

This study provided me with great advantage of acquiring new knowledge of the different theories of LS used with students with dyslexia. It definitely provided me with clear insight in what research says about LS and what happens in practice in the field of LS & dyslexia. Hence, the findings will be significance to create awareness among teachers in Oman, perhaps the findings and strategies used by Czech teachers can act as guidelines in meeting the needs of students with dyslexia through using learning styles.

In addition, this Czech research experience can act as a pilot study to initiate a large scale study to fill the gap in research in the field of dyslexia in Oman; as it provided me with areas of strengths and weakness when carrying a research. Hence, it boosted my confidence to carry more research on the field of SEN once I go back to my country. Nevertheless, I believe this study will also be a contribution for those who spend hours on the net trying to find literature on what teachers say about practicing LS with students who have dyslexia. In addition, it might enforce the policy makers at schools to change their policy regarding helping students with dyslexia by diverting their focus to teaching students to learn how to learn and be more independent rather than arguing what theory works better.

Last but not least, it might provide teachers with different views of what is going on with research on LS theories making them reflect on their own teaching strategies and encourage them to be reflective on their teaching strategies and actions. Perhaps it might encourage more teachers to write about their own experience and research on the field of LS for students with dyslexia. As the contribution of teacher's researchers is vital to the continuing well- being of the educational system and in the field of LS is doubly relevant, as there is a need to further integration of the conceptual basis of diverse sets of theory in an applied context (Rayner, 2007, p29).

1.6 Limitation of the study

Since this study was carried in Czech Republic, language was the most probable concern for me. Hence, Interviews and questionnaires for the principle, and the teachers were not possible to conduct without the presence of interpreter. This raised a lot of concerns with my hope that my questionnaires were raised according to my objectives. It also resulted on the limitation of reaching the voice of those students with dyslexia regarding their empowerment to use their learning styles, which was going to make my study in better position, as I always believe its more significance to check on teachers practice by gaining the voice of their own students. Perhaps I can overcome this limitation when I will carry similar research in my own country.

In addition, since this case study was conducted in one school it's acknowledged that the small sample available for the study made my results not generalizable beyond the specific population from which the sample was drawn.

1.7 Summary

This chapter primarily outlined the background and motivation for the present study. It also provided brief outline of the context and the ways of achieving my objectives and some limitations of my study.

Chapter Two: Literature review

Introduction

This chapter will provide an overview of the latest researches done in the field of learning styles (LS). It will show the connection between learning styles and dyslexia, it will provide an overview of some of the used theories of learning styles by teachers and the role of empowering students in using their learning styles. Nevertheless, it will be very clear from this review that the field of LS is a controversial issue that has raised a lot of critical discussions and arguments.

2.1 Definition of dyslexia and its relation to language problems

Throughout the year's different definitions of dyslexia emerged covering different aspects of the difficulties that pupils might encounter in their learning. The Orton Dyslexia Society in 1994 defined dyslexia as:

"A specific language based disorder of constitutional origin characterized in single word decoding, usually reflecting insufficient phonological processing abilities. It is manifested by variable difficulty with different forms of language, in addition to problems in reading, a conspicuous problem with acquiring proficiency in writing and spelling" (Julian, 1998, p 193)

On the other hand, the British Dyslexia Association (BDA) introduced its latest definition of dyslexia in 2007, which suggests that:

"Dyslexia is a specific learning difficulty which mainly affects the development of literacy and language related skills. It is likely to be present at birth and to be lifelong in its effects. It is characterised by difficulties with phonological processing, rapid naming, working memory, processing speed, and the automatic development of skills that may not match up to an individual's other cognitive abilities. It tends to be resistant to conventional teaching methods, but its effects can be mitigated by appropriately specific intervention, including the application of information technology and supportive counselling" (BDA, 2007)

From the previous definition of BDA (2007) dyslexia is related to problems in cognitive process, Reid (2005) defines the cognitive process as follows:

"Cognition refers to thinking and the different processes the learner engages in during thinking, problem-solving and learning. These processes include short- and long-term memory, processing speed and processing style as well as the use of background information and previous knowledge. How information is processed and how the curriculum is developed influences learning and not merely the factors relating to the cognitive difficulties experienced by the child." (Reid, 2005, p32)

Hence, the definition of dyslexia has changed from being described as language based disorder to a wider understanding covering different cognitive learning aspects such as short-term memory, sequencing, auditory and/or visual perception and motor skills. Meaning that students with dyslexia encounter problems in acquiring the needed level of language aspects such as reading, writing or spelling due to their limited capability in acquiring the appropriate level of their cognitive abilities .This brings to mind that students with dyslexia might experience different range of difficulties, hence teachers have to spend more time on figuring out effective teaching and learning strategies. This has served for some as a challenge and for others as a way to be creative in teaching.

2.2 Implication of having dyslexia in the process of learning

Poole (2003) argues that since many of us tend to have expectation that children should have the ability to learn in 'pre-set plan', we forget what they want to learn and we focus on what we want them to do in specific 'time scale'. Hence when they fail to meet this scale especially for those who have certain delay in reading and writing such as dyslexia we judge them as 'failures'.

Children who have Dyslexia don't only have problems with reading; they also have problems related to information process which is one of the sources of all the language problems such as poor reading, writing or spelling (Reid, 2001). Therefore, many researchers have written about the neurobiological basis of dyslexia and the importance of acknowledging these problems before solving their reading or writing needs. (Exley, 2003, p213) pointed out that "students with dyslexia can be helped by changing the way they move, exercise, and by the use of the Multi-sensory approach to the teaching of literacy skills". Others like Tilstone, et.al (1998) and (Given & Reid,

1999) suggested that effective teachers are those who are aware of the importance of identifying the Learning Styles (LS) of their pupils and try to use range of strategies and appropriate teaching materials which matches the learners LS. Hence, finding the existing practice in accommodating for the different learning styles for students with dyslexia was crucial to the current study.

2.3 Understanding Learning Styles (LS)

2.3.1 Why it's important to understand learning styles (LS)?

The background of "Learning styles" started since early 1980s, where doctors used MRI scanners to treat brain-injured patients, and tried to find out how the brain processes information. Hence, researchers from the field of psychology took the results and added to them to develop brain-related approaches to learning (Revell, 2005). Yet, as years passed by a lot of its researches have come from outside this field, many have come from the field of "healthcare, vocational training companies and even from different levels of our education systems" (Cassidy, 2004, p420). This has played a role in raising various definitions, models, instruments and different interpretations leading to some confusion for those who were interested to practice some of these theories in real situations, especially when it came to the stage of choosing the appropriate instruments of identification from all these studies (Cassidy, 2004, p420). In addition, this confusion has also played a role in forcing some researchers and practitioners to forget about the principle aim of the whole concept of LS which is catering for the different learning.

According to (Slack and Norwich, 2007, p52) "Learning styles enables some generalization across different learning situations, and is therefore useful in the principle of planning appropriate teaching". They also suggest that it focuses on teaching according to the student's cognitive abilities which in return will improve the learning and achievement of the learner. Hence, acknowledging the existence of the different LS is one way of acknowledging and focusing on the different abilities of the learner instead on focusing on the disability. Nevertheless, by acknowledging its'

existence might not necessary mean to meet all learners' needs but it certainly means that the teacher is aware of the ability of the child and will try to solve the obstacles.

Nonetheless, Allport (1937) cited in (Cassidy, 2004, p420) suggested that the application of cognitive styles such as *"'problem solving, thinking, perceiving and remembering' in any ' learning situation can be called as learning styles"*, since the definition of dyslexia provided by (Reid, 2005) also suggests the link between dyslexia and cognitive styles, it is of no surprise that in dealing with issues of dyslexia one should take in mind the issues of learning styles. Desmedt & Valcke (2004) and Saracho (1988, p 213) also suggested that sometimes LS has been used as synonymic with cognitive styles and that many researchers whose field of interest is individual differences have focused their studies on cognitive styles or LS. Therefore, in this current study the focus will be in learning styles.

2.3.2 The family of learning

Since there is a connection between learning styles and many other different aspects of learning such as learning strategies, learning preferences or even Multiple Intelligence many have tend to use it interchangeably with such aspects, with the latter one being used interchangeably widely in Oman.

Smith & Dalton (2005) made a distinction between Learning Styles (LS), learning preferences and learning strategies in the following manner:

"learning styles is a distinctive and habitual manner of acquiring knowledge, skills and attitudes through study or experience; it tends to be more stable within an individual across different learning tasks and contexts; "learning preferences" are more variable across different learning tasks and contexts; and "learning strategies" vary between learning tasks on a basis how best the learner believes a learning task can be successfully completed" (Smith & Dalton, 2005, p7).

In other words, one can consider learning styles as a more automatic than learning strategies which are optional as students adopt some of these strategies while studying depending on the different tasks (Hartley, 1998 cited in Cassidy, 2004). Moreover, Reid (2005) and Cassidy (2004) all agree that learning strategies is not only having the learning style or preferred style it's about how a child can use his/her ability

to reach or complete the task, and in a sense this is what matter most in order for the learners to acquire better achievement.

2.4 Current and related research in the field of learning styles

It could be said that many teachers have good intention in their teaching for students with different abilities and needs. However, a simple question yet with much complex answer is what can teachers do to translate their good intention of helping all students including those with dyslexia into reality and practice?

Throughout the years there have been a move on the concepts of enhancing learning shifted from focusing on the level of intelligence and academic achievement in to other concepts such as, motivation, self esteem (Fielding, 1994) and some researchers like (Reid, 2005, Loo, 2004, Cooper 2004) calling for the acknowledgment of the existence of different LS as away to address individual learning differences. Entwistle (1991) cited in (Fielding, 1994) argued that it's not about what theory teachers use to accommodate their students' learning styles, rather it is about the basic and crucial aim of all these theories which is "acknowledging the dangers of allowing one particular approach in teaching which excludes the voice of others" (Fielding, 1994, p395). Yerxa (2003) cited in (Cassidy, 2004) also suggested that the simplest way of making difference in learning, is to be aware that there are different ways to approach teaching and learning. By following the suggestions of Yerxa's (2003) and Fielding (1994) my journey of researching learning styles with the existence of all these different models will be made much easy, by looking at it in a way which I would like to call as 'simplified' way, a way which has no intention on focusing in specific model, a way which empowers the teachers to decide how they can reach to know their students LS by identifying their preference styles in a way that is understandable and practical to their school system.

Rayner & Riding (1997) discussed about the different definitions and theories of learning styles and concluded that LS is "about how person takes information into his/her brain to learn to their best". Nevertheless, (Reid, 2005, p65) suggested that LS should be *"set and identified for a porpouse in the learning context as by doing so many teachers will be able to overcome the obstacles of inclusive education"*. He even

went on simplifying the idea of LS by providing practical examples of changing the environment of the classroom to suit the needs of the students from colour to light and sound as he puts it in this way *"what has been considered as distracted in previous years such as the use of headphones with relaxing music while studying might be considered now days as a preferred LS to some students"* (Reid, 2005, p65).

As a beginner researcher and a researcher of this study I acknowledge the controversy of researching learning styles and the dangerous of focussing in specific theory or instruments. Therefore, though my title is about learning styles yet I will focus more on learning preference and how it can be used to guide teachers into the field of learning styles. This will support the view of Reid (2005, p54) which states that "children in every classroom will show a verity of styles and preferences, using this rational it's possible to cater for the diversity that teachers have to cater for within an inclusive classroom". Therefore, this leads to believe that by identifying students learning preferences, it is one way of reaching for the different learning styles.

2.4.1 An overview of research in the field of learning styles and school practice

Coffield, et.al (2004, p22-35) identified 71 models of learning styles and evaluated 13 of the most influential models, in terms of their design, reliability, validity, implication for pedagogy, evidence of pedagogical impact and overall assessment. Some models were related to areas of the brain; others were related to theories of personality, motivation, or developmental. Some of these models were as follows:

- Allinson and Hayes' Cognitive Style Index (CSI)
- Apter's Motivational Style Profile (MSP)
- Dunn & Dunn model and instruments of learning styles.
- Entwistle approaches and study skills inventory for students (ASSIST)
- Gregorc's Styles Delineator (GSD)
- Herrmann's Brain Dominance Instrument (HBDI)
- Honey and Mumford's Learning styles Questionnaires (LSQ)
- Jackson's Learning Styles Profiler (LSP)

- Kolb's learning styles Inventory (LSI)
- Myers-Briggs Type Indicator (MBTI)
- Riding's Cognitive Styles Analysis (CSA)
- Sternberg's Thinking Styles Inventory (TSI)
- Vermunt's Inventory of Learning Styles (ILS) (Coffield et.al, 2004, p24)

The rise of all these different models forced Coffield et.al (2004) to call upon practitioners and policy makers in taking more care in their use of LS and to reflect on the possible limitations of ignoring the other social contextual factors in teaching and learning when labelling student with particular LS. Franklin (2006) also agrees with the previous presumption as she argues that LS in many cases has not helped students to learn, instead it leads to pupils being labelled as being particular types of learners. In evidence to Franklins' claims (Revell, 2005) on his article about the application of LS in UK education system, pointed out that some children were labelled either by wearing label badges to indicate their preferred style; or by having labels on their desks to show whether they are auditory, kinaesthetic or visual. In contrary, he also offered some good examples of applying learning styles in practice without labelling, as he provided the example of the head of Northamptonshire's Campion school that carried a course on "learning to learn" which involves children discovering their individual learning style. So the school opposed to simplistic approaches and didn't approve of labelling children, or over-emphasizing on a particular style. It focused on engaging young people in the process of learning by asking their students what they have learned and how they can use it in the next lessons and their aim was not focused on terminology. Therefore, it could be argued that this issue of labelling depends on the way teachers convey theory into practice, one can also argue that if LS are being perceived as a strength rather than vague label, it should not cause any harm instead it should lead into gaining more access to learning in more positive way. Yet, the previous writers (Revell, 2005; Franklin , 2006; and Coffield et.al, 2004) are also right in rising our attention to educate learners how to learn by giving them awareness on their own learning styles instead of focusing on only training teachers how to match their teaching methods with their students learning styles.

On the other hand, Reid (2005) argued that though (Coffield et.al, 2004) might have argued in their review to be very cautious in using instruments of LS, teachers should not underestimate the power of using LS in classroom practice to enhance the achievement of their students. In addition, he argues that what (Coffield et.al, 2004) has found can be found at any form of classrooms tests or measures, as the outcomes of very controversial issue depends on the tasks and type of skills measured and that instruments being used to measure the validity of any inventory should be used justly and made clearer to the reader. Saying so, it does not mean that teachers should overlook all these issues, but at the same time teachers should take these instruments "as guidance to their children's learning preferences" (Reid, 2005, p55).

Still, it is crucial to separate the interesting researchers' debates on LS from what practically can help children with learning difficulties. This can be done by widening our perspective in the way we can deal and help students with dyslexia as "instead of focusing on the child's problem we can make schools value individuality and creativity while meeting the needs of all learners, especially those who might be considered as different in the way they learn" (Poole, 2003, p168).

2.4.2 Research and practices in the field of Learning styles and dyslexia,

According to (Slack and Norwich, 2007, p51) regardless of the appearance of all these different theories of learning in UK for a long period of time, it was not until recently that the interest of LS in education policy and practice and its practical application in schools that has been brought to attention. (Slack and Norwich, 2007) In their study of students in primary school who have needs in spelling found that students made good progress in their word spelling after one week of teaching them according to their preferred learning styles. Hence, this study agrees with the recommendation of Tilstone, et.al (1998) on solving student's difficulties through matching teaching strategies to students LS. On the other hand, it disproves Olson's assumptions who claimed in (2006) that there is no valid evidence in research to prove that matching LS results in any learning benefit; as she considered LS as being a myth.

At the same time, Cooper (2004) who is the Head of the Division of Dyslexia, literacy and Learning Styles at South Bank University in London, also pointed out that despite the fact that LS practitioners rarely publish their research, doing his own practical research in LS theories he found out that they are very effective on enhancing the achievement of students with dyslexia. Therefore, having little research regarding how teachers put LS theories into practice should not make us ignore the fact that some teachers do change their teaching strategies for example from using only visual activities to using audio or multisensory activities because they think some of their students learn more effectively in such ways -especially for those with dyslexia-, though these same teachers might not know a lot about the theories of LS.

Moreover, Mortimore (2005) pointed out that LS can be assessed using questionnaires, interviews, behavioural observation, or by the creation of profiles or combination of all four. Yet, on his critic to the work of Exley (2003) on teaching students with dyslexia according to their preferred LS, recommended taking cautious with LS theories when dealing with students with dyslexia, as he thinks that some of these theories which suggests that learners can be visual, auditory or kinaesthetic, might have advantages and limitation and one should discuss this limitation and check its effect on practice before making dramatic shifts in the ways of work. On the other hand, Smith & Dalton (2005b) suggested that in practice teachers and trainers can choose one or two of the LS theories that make personal sense to them and that they feel comfortable working with.

According to Revell (2005) one of the most popular theories is the one advanced by two New York researchers, Rita and Ken Dunn (Dunn & Dunn) theory, which also referred as the "VAK" approach, as it focuses on visual, auditory and kinesthetic learning styles. On the other hand, the study of (Desmedt and Valcke, 2004, p451) found that Kolb's LS theory was the most cited in the field of learning styles literature and Dunn's theory is the second most influential author and that these two authors have very high impact on the learning styles research field. Where Dunn's theory (1978) or the VAK theory being considered as the first instrument used for pupils grade

3-12 and most implemented in primary level in recent days, this theory "does not measure psychological factors rather it measures student's preferences regarding the environmental, emotional, sociological and physical surroundings in their learning environment"(Desmedt and Valcke, 2004, p457). Nevertheless, Reid (2005) pointed out that most teachers in primary schools use the VAK theory due to its simplicity and practical appliance.

On the other hand, the DEMOS team in (2005) stated that there are various new languages of LS that might be found in schools such as:

- Activists, theorists, pragmatics, reflectors.
- Diverges, converges, assimilators, accommodators.
- Verbalisers, imagers, analytics, holists.
- Analysts, changers, realists
- Visual, auditory, kinesthetic. (DEMOS, 2005, p11)

The DEMOS team declared that teachers can be good or poor professionals when dealing with LS, "Whereas, *bad professional practice restricts opportunities, and narrows intellectual development, good practices uses these schemes as ways of expanding opportunities and widening ways of learning*" (p11). Hence, regardless of what theory a teacher can choose to use ; to be a good educationalist a teacher should know that though some learners have a dominant learning style, they should not limit their students to that style or type, but should ensures that students have opportunities to strengthen the other learning styles. Likewise, Reid (2005) argued that for those who are against these theories it's all due to the fact of miss interpretation of these theories in practice especially when practitioners think that there are fixed styles. He argues that one should use common sense from their teaching experiences, as such LS are not necessarily fixed and that for those who get better chance to develop other styles will develop it, yet teachers should know that by not providing opportunities for their students especially those with special needs to have their preferred LS will contribute to their failure.

Still, Hanson (1988) raised an interesting advice to teachers which favors the use of all different learning styles in their instructional reading paradigms. As this argument supports the view of: 'by using all different styles in the classroom, there is a great chance to meet every student's individual style, at the same time all students will be enforced and challenged to use all modalities of styles". The argument of Hanson (1988) is also supported by Hastings (2005), who also suggests that effective schools are those who can embrace learning styles in trying to encourage teachers to make lessons accessible to all pupils by including visual, auditory, kinaesthetic and tactile elements. Nevertheless, a study of Loo (2004) examined the relationships between one of the learning styles theories "Kolb's theory" and 12 different learning preferences, concluded that educators should *"use a variety of learning methods and recommended that students should be encouraged to be receptive to different learning methods rather than trying to link specific learning methods to specific learning styles"*(Loo, 2004, p99).

All these different findings of practical ways of applying learning styles bring us to a crucial point which was suggested by both the findings of the DEMOS report (2005) and Rayner (2007) for the need of more practical evidence of the use of LS in schools, as they recommended:

"Ideally, research should now move to include a survey of the application of contemporary use of 'learning styles' in our educational system and further development of a personalized education" (Rayner, 2007, P26)

One of the rare studies on the practice use of LS is the study of (Slack and Norwich, 2007) testing the reliability and validity of using the VAK theory to identify learning styles of primary students age 7-10 years in a class for teaching word spelling using different teaching methods. They found that the visual and auditory scales, but not the kinesthetic scale, were reliable (internally and re-test) and that such learning style inventories need to be empirically evaluated before educators promote for its use. However, they also suggested that these findings are enough to recommend the significance of using learning style for classroom-based teaching. They also concluded that it's not easy to identify the preferred LS of students as some children prefer both

visual and auditory modes and that by acknowledging "mixed learning styles in teaching, it is possible to go some way to addressing some of the criticisms of learning style overgeneralization, false expectations and labeling" (Slack and Norwich, 2007, p61).

Furthermore, The British Dyslexia Association on its' "Friendly School guidance", based on multi- sensory teaching, suggested that *"it's essential to know that good practice for Students with dyslexia is also a good practice for every child, and while dyslexia friendly teaching methods can be applied to all children, the other way round might not work"* (Poole ,2003, p175).

2.4.3 Introducing students to learning styles

By critically observing the literature it's possible to suggest that not all researchers agree on whether matching teaching methods to student LS is effective in terms of enhancing learning and its outcomes. However, luckily most of them for example (Smith & Dalton,2005b, Smith, 2002, Prashnig, 2005,Rayner, 2007, Fleming & Mills, 1992, Mortimore, 2005, Exley, 2003 & Coffield, et.al 2004) all agree that one way of making LS work is to involve learners in knowing their own LS or preferences and to teach them how to use it and how to learn.

Smith & Dalton (2005) pointed out that learners can understand their LS and preferences from their own reflection about their learning; and at other times it can come through comparing their good learning experiences with their bad ones. However, this might not necessary be the case for students with dyslexia, especially in some countries such as in the case of Oman, where students with dyslexia in many cases are being educated in a manner that they need teacher's support to provide them with confidence that 'they can make right choices especially at primary level'. Yet the simplest way is for teachers to share their suggestions with their students and to challenge them to think about their likes and dislikes in learning.

It has been suggested by Mortimore (2005) and Fielding (1994) that the issue of how best to involve students in the process of identifying and using an awareness of learning styles is always a matter of considerable interest and comfortable of teachers using the different instruments of learning styles, starting from just observation into

the use of more theoretical way of asking their students and make it as a whole school policy as in the case of the study done by George (2005) and Exley (2003) which will be discussed later in this chapter. (Fielding, 1994, p403) also pointed out that some schools combined learning styles sessions with study skills or action planning programmes depending on their age and class. For example, the pilot study done by George (2005) in one of the primary schools in Scotland consisted of 30 pupils aged between 7 and 8 years to investigate the effectiveness of the practical implementation of a learning styles approach in the classroom. She didn't specify a specific theory on LS but rather she took the simple way of defining LS by asking students what kind of learning environment they prefer such as working at workstations, Listening table, Group tables, the need of changing the light in the classroom with combination of the use of Brain gym. At the end she asked the students and the teacher about their experiences and views on the changes made, and the outcomes where generally positive. George also mentioned that teachers' interest was very important in empowering the role of students in using their own LS. This also proves (Snider and Roehl, 2007; & Ballone, 2001) suggestions that teachers beliefs play a vital role in the outcomes of classroom practice, and their beliefs effects their expectations of their students' success. They also argued that since there is a lack of agreement about what is the best practice in schools, teachers beliefs will always play critical role in shaping teaching practices, as they concluded that *"teachers reserved their strongest beliefs for the importance of learning style, eclectic instruction, and small class size in the primary grades, with half of them believing that factors such as home environment or dyslexia prevent children from learning basic skills despite the school's best efforts"* (Snider and Roehl, 2007, p873). Therefore, it could be said that if teachers have more positive beliefs about the ability of their students to share and to discuss their needs and preferences regarding their learning regardless of their abilities and needs, there will be better chance for teachers to practice what research say regarding the power of students' voice on enhancing their achievement (Lewis & Porter, 2004; & Lewis, 2004). However, despite the importance of teachers' beliefs about certain issues related to education and catering for the needs of students with learning difficulties, there are very little research on the field of what teachers think about LS and practice. As

mentioned in Chapter one that this is one of the reasons of focusing this study on having the views of teachers regarding catering for the different learning styles of students with dyslexia. Exley (2003) and George (2005) are some of the rare studies in the field of teacher's application of LS in schools. Though the study of Exley (2003) was criticized d by Mortimore (2005), still both studies of Exley (2003) and George (2005) indicated that students and teachers were comfortable to be involved in the study and positive outcomes appeared on students' achievement. Nevertheless, the study of George (2005) proved that if given the appropriate chance children were able to discuss in a mature way the conditions in which they could learn and concentrate well.

Another study which was also concerned about students' voice about their own learning is the one written by Bragg (2007) on the role and experience of a school principle in the journey of students voice, which started with 'pupil voice' assemblies, where 120 children aged between 8 and 11 were asked to discuss their perceptions of the school and how they could work together to make changes. The principle also used 'buzz groups' , and asked pupils to move around the hall to different corners to vote on statements or ideas, this techniques meant that all children expressed their views even if not verbally. This led to some changes in the school, it lead to : establishing a new tuck shop for morning break time (children complained that they often became too hungry to concentrate on their work by late morning) and a 'suggestions box' was introduced in the dining room where children could write about any concerns and know that a teacher would help sort them out, Children designed and decorated this box, and then introduced it and explained it to other children—and it was never abused (Bragg 2007, p509). At the same time the principle provided teachers with handouts about how to support the whole procedure of giving their children a voice.
Such studies are important in the field of education, as it plays a role in encouraging teachers to participate in research that is of direct relevance to their professional practice, which in return will draw their attention to the possibility of involving our children to identify their own learning needs, especially those who have difficulties in learning. O'Brien (2009) who has long teaching experience in teaching students with dyslexia says that " *most important and yet simple thing a teacher or parent can do for*

students is to give them the knowledge of what their learning style is and how to use it".

2.5 Dyslexia in Oman context and implication for research on learning styles

Dyslexia in Oman is a common issue in almost every primary or secondary school. Many teachers struggle to read new researches and studies on how to help these students and to meet all their different needs, this has also diverted teachers' interests on any new teaching methods that emerge in the field of education. Since, the LS field is still literally new to the Omani context and little has been written on this field in Arabic language, with many not being able to read English researches, a lot tend to follow on the advertising agencies of LS without knowing its implication or limitation. Hence, the rise of many private agencies clamming being professional trainers for these different LS especially for the VAK and Multiple intelligence theories taking the lead, which made the whole issue of applying LS too massy to the extent that many parents pay large fees believing that the whole issue of dyslexia will be solved in a matter of months and forever, forgetting the fact that 'dyslexia is a lifelong disability'. Revell (2005) on his article on LS pointed out that some consultants are willing to accept large fees from schools for the unsure theories without mentioning the scientific doubts about the approach they are selling, and this what happens in some private institutions in Oman.

In addition, many teachers and parents do ask the question of 'why the Ministry of Education is not having specific policy regarding these theories?' Revell (2005) also pointed out that "the professor who developed a book on multiple intelligences (MI) was aware that many educationalists were adapting his ideas. Yet he was in shock when he found out that in Australia an entire state had adapted an education programmes based in part on MI theory and that the program used mixture of left brain and right brain contrasts, sensory learning styles, neurolinguistic programming and multiple intelligences approaches". Therefore it's a good sign for our government not to allow any government school to take such a step before studying the latest research on this field.

Hence, since there is a lack of fully understanding of the implication of LS for those who are under achievers in Oman and the lack of research on this field is a valid reason for me to conduct this study. Perhaps this study will provide me with groundwork to conduct similar study that will be of many advantages to teachers and parents. It might also be possible once I go back to my country to conduct a different pilot study on how to empower our students using their awareness of their own learning styles. As its clear from the literature review that the emphasis is no longer on different kinds of learning styles, the world has moved now into looking at how children like to work and how they can get the best out of themselves (Hastings,2005). Therefore, I can argue that learning styles is about empowering our students to decide the way they want to learn.

2.6 Summary

Perhaps through this literature review one cannot reach a deep understanding of all the theories of learning styles (LS), but it would be wise for those who are interested in knowing about the vast amount of LS theories, how to apply them, and its validity to look into the references provided at the end of this research. As this review was mainly to give an overview of the different understanding of the application of learning styles in education systems especially for those who have dyslexia without the aim of advertising or evaluating one theory over another. Hoping that, my research will be one of the contributions to the field of the real practice and application of LS in education systems, or at least one step forward into this contribution.

Chapter three: Methodology

Introduction

This study is aiming for finding out how language teachers support their students with dyslexia to enhance their achievement according to their preferred learning styles. In this chapter I will discuss how I'm intending to reach my aims through providing my research design, methods used, as well as the limitations and advantages of the various procedures used. Essential issues in the field of research such as the validity and the ethical issues will also be discussed.

3.1 Research design

Usually people research either to seek new knowledge or to confirm or to disprove knowledge that they already know (Robson, 1993). In the field of education a lot of researchers investigate to prove or disprove some theories that are related to learning. One of the new world of learning is the theories of LS and which has been proved by some researchers like (Mortimore, 2005; Exley, 2003; Elliot & Place,1998; Fleming & Miles, 1992) to have a lot of benefits in students' achievement and learning, yet many have overlooked the issue of the experiences of those concerned with practicing this theories in schools and classrooms.

Hence, this study will tend to explore the views of teachers and their role of identifying and accommodating their students LS. Fraser (2004, p18) provided different ways of looking at a research one of which can be related to this current study as empirical research, which she defines as "a knowledge that has not been developed merely from thinking or theory but from observation or experiment which requires to accept our experience of the world as a valid way of deriving new knowledge". However, since people experience the world in different ways, it's essential to explore our claims 'as researchers' and the claims of those who are involved in our research in a systematic way of investigation, this way will lead to discover what is true and how far is that truth . Therefore, to get systematic investigation there is a need for planning specific design of paradigms and approaches for the research (Cohen et.al, 2000).

3.1.1 Research paradigm

Research approaches and paradigms usually comes from within an ongoing context of the researchers' systems of beliefs and practices, (Morgan, 2007, p49) stated that "Within the science studies, the consensual set of beliefs and practices that guide a field is typically referred to as a paradigm". In addition, Guba (1990) cited in (Creswell, 2007, p19) defined paradigm as " a basic set of believes that guides an action". From these broad definitions one can argue that one's beliefs and assumptions can always guide him or her in the journey of research. This leads to believe that one can interpret people's reactions depending on his/her own background, beliefs and experiences. Likewise, it will also mean that since people have different backgrounds and experiences, in many cases there will be different interpretations to the same situation.

However, to my point of view it is more valid to go beyond this boundaries of broad definitions, Morgan (2007) also agrees that in a research it's not enough to explain certain paradigm by providing definitions which are in many cases very broad on its understanding of beliefs, what it is more important is to clarify what is contained in regarding these different beliefs and views inside the researcher and in the world surrounding him/her, which also should focus on "a person's thoughts about the nature of research" (Morgan, 2007, p52). Therefore, the intention of my research is to explore how teachers accommodate for their students learning styles specifically for those who have dyslexia. This meant to observe and explore the different interpretations teachers have regarding their students learning styles, and this interest guided me to gain better understanding about their different views. (Creswell, 2007, p21) points that when a researcher "intent to make sense and interpret the meaning others have about the world" it leads to "interpretivist paradigm".

On the other hand, (Brantlinger et. al, 2005, p196) refer to studies as *interpretive* when "they contain a critical element which involves interrogation of the meanings of the daily life occurrence, trends in any field, and values in social life". As an educationalist and with all the new trends that appears in our field, it's important to question these trends, it's also important to explore the feelings and experiences of

those who are concerned and who might practice these trends. As Cohen et al. (2007) suggests that "the social world can be understood only from the standpoint of the individuals who are part of the ongoing action being investigated' (Cohen et al., 2007, p 9). In the case of this study 'the feelings and experiences of teachers regarding using their students preferred LS', is one of the ways of exploring the practicality of some of these trends of LS on the field of education and learning. It is also a way of looking at the issues of LS in different angle, an angle which little research has been done about it, and which I believe will add a lot to my understanding of this new field and might even call for a change on actions and theories.

Saying so one cannot deny that not all researchers use the interpretivist paradigm as some prefer to follow the 'positivist paradigm' to generate objective validated research findings, where in many cases large samples of participants are involved and better validated and generalizable results can be obtained (Gray, 2005). However, the positivist paradigm has been criticized by (Cohen et al., 2007, p17) because it "defines life in measurable terms rather inner experience, and excludes nations of choice, freedom, and individuality regarding the universe as a living organism rather than as a machine".

Nonetheless , in the field of special education and while everyone is moving towards inclusive education, interpretative paradigm which comes under qualitative researches has served researchers better outcomes because it allows them to untangle the complex realities of schools and classroom practices (Ghesquie`re et al., 2004). Therefore, using interpretive paradigm instead of the positivist paradigm for my study, has allowed me to rely on the views of my participants which have certainly allowed me to look at the complexity of their views rather than "narrowing their meanings into a few categories of ideas" (Creswell, 2007) and better reflection was made.

Moreover, Bryman (2004) sees Interpretivist as "strategies which respects the differences between people and the objects of the natural sciences and therefore requires the social scientists to grasp the subjective meaning of social action"(Bryman, 2004, p13). in addition, Kierkegaard, (1974) cited in (Cohen et al., 2000, p17) stated that "when the question of truth is raised subjectively, reflection is directed subjectively to the nature of the individual's relationship". This meant by following the

interpretivist paradigm, I will reveal teachers views not as standing facts which might lead to false judgments, rather I will reflect on the results and their views for the aim of intensifying various interpretations, which will certainly lead me to better understanding of their position in the practice world.

In conclusion, following my interests that I have mentioned earlier and agreeing with Gray (2005) who described the possibility of individuals having multiple interpretation of the same single situation, I decided to follow the interpretivist paradigm to seek great depth on the issues surrounding my study.

3.1.2 Research approach

Following my interests of conducting this research which were a way from knowing how many teachers agree or disagree with the different theories of LS, rather being interested on how they can meet their students preferred LS in real classroom practice? And whether it's possible to fit some of the theories into their everyday school practice? My aim was to get closer to teachers' feelings, their way of thinking, and even closer to their classroom work, which I believed will make me view their perspectives and experiences in a different way.

Therefore, my interests granted my research an exploratory and interpretivist nature, which in return directed the research to a qualitative approach. (Fraser, 2004, p19) provided broad definition of Qualitative approach as "an empirical research where the data are not in the form of numbers". However, researchers like (Bryman, 2008; Creswell, 2007; & Robson, 1993) all agree that the lack or presence of numbers in a study is not the only way to suggest the study design is quantitative or qualitative rather the interpretivist nature of the study is a way which can lead to qualitative research.

(Brantlinger et. al, 2005, p195) also specified qualitative research as "a systematic approach to understanding qualities, or the essential nature, of a phenomenon within a particular context". Moreover, Gubrium and Holstein (1997) elaborated on the meaning of qualitative research, to cover the aim of "seeking to understand people in their own terms by providing wide description of their thoughts and interactions" (Bryman, 2004, p265).Hence, following my interest of exploring the practices of the

field of learning styles in real school situation it was more suitable for me to conduct qualitative research. Fraenkel and Wallen (2006) suggested that a researcher can use qualitative research to describe in detail what lies behind a particular activity or situation. Brantlinger et. al, (2005) also suggested that qualitative research in the field of special needs is one of the important steps to get deeper understanding about attitudes, opinions, personal reactions and beliefs of those who are involved in this field. Similarly, Bryman (2008) agrees that these aims of understanding opinion, beliefs and personal reactions cannot be reached by using quantitative research as this later design tends to overlook the fact that people interpret the world around them.

Saying so, though I decided to conduct qualitative research under an interpretivist paradigm; this does not mean that all my data collection methods are of qualitative nature. Creswell (2007) suggested that quantitative methods of data collection could be used to further support or "deepen" the description of qualitative data and this was one of the methods used by this study to reach the final aims. However, it's essential to mention that the quantitative method of data collection was used for the purpose of exploring, describing and explaining the views of the teachers it was not used for the purpose of generalisation. Qualitative research "is not done for the purposes of generalization but rather to produce *evidence* based on the exploration of specific contexts and particular individuals" (Brantlinger et. al, 2005, p203). Therefore, using qualitative research in the field of teachers perspectives on matters related to learning even if numbers have been used to generate some explanation , the final aim is "to understand, rather than to judge and generalise" (Hammersley, 2000, p395) .

Though, some researchers might consider that quantitative research leads to more scientific results compared to qualitative ones, as it provides facts from large samples based on a theoretical explanation (Gray, 2005). Still others like (Brantlinger et. al, 2005, p195) asserted that qualitative design which undergoes systematic planning also "produce science-based evidence that can inform policy and practice in special education". Therefore, it is hoped that planning a systematic qualitative approach for this study will convey awareness about the field of learning styles and by following interpretivist paradigm I will be able to show some appreciation of the different

attitudes that teachers have regarding recent reforms in the field of education, such as in the field of learning styles and its implementation and hopefully their views will help to change some of their school policies.

3.1.3 Case study approaches

Case study is an "empirical inquiry that investigates a contemporary phenomenon within its real life context, especially when the boundaries between phenomenon and context are not clearly evident" (Yin 1994, cited in Gray, 2007, p123). Case study can also be considered as an "exploration of a bounded system (group, individual, setting, event, phenomenon, or process "(Brantlinger et. al, 2005, p197). Therefore, it's possible to say that case study is related to a research carried during a certain period of time in a small or large social system such as in a school system, where research can lead to unique case in its natural environment.

Despite the criticism that might be raised in the case of case studies especially those with small sample of participants like in the case of this study, due to the issues of time limits and schools circumstances, still this approach was used for this study for several reasons. One of the reasons is that case studies has been proved to play an important role in the field of qualitative research, (Kenny & Grotelueschen, 1984) cited in (Ghesquie`re et al., 2004) suggested from the point of view of qualitative research case study can be characterized as "detailed studies of separate cases intending, on the one hand, to identify and describe phenomena and, on the other hand, to contribute to the development of theory" (Ghesquie`re et al., 2004, p172). In the case of this current case study, its' results might not necessary change the theories of LS; however it will certainly encourage the researches of LS to observe critically the implantation of the different aspects of LS. It will also promote awareness regarding the reasons behind teachers 'roving away' from the theories of LS. Nevertheless, it's hoped that it will also change the way practitioners view and implement LS in their classrooms especially for those who support students with dyslexia. Hence, it's of no surprise that (Foster et al., 2000, p. 228) considered case studies as a way to improve "the quality of public debate about educational inequalities".

In addition, Adelmans *et al.* (1980) refer to case study as "a step to action" (Cohen et al., 2000, p. 184), an action to improve self, institutional, and educational policy. This means that by accumulating data from different sources of evidences in one particular context will provide depth understanding of the different angles of the issue of accommodations provided to meet the learning styles of students with dyslexia, hence gaining more practical evidence in catering for the different learning styles of students with dyslexia, which is also of a great need in my own context in Oman.

3.1.4 Purpose of study

The main objectives of my case study as mentioned in chapter one are:

5) To develop a deeper understanding about the awareness, beliefs and perceptions teachers have regarding the theories of learning styles and its implication in schools

6) To identify the extent in which teachers take account of the students preferred LS and using the theories of LS, and what encourages them to use such theories.

7) To identify the range of practices already taking place in school context, in catering for the needs of their students with dyslexia through identifying their learning styles.

8) To find out the barriers that faces teachers and support factors on using the theories of LS.

3.1.5 Research question

My main research question was:

(How Czech language teachers in Prague use learning styles to support students with dyslexia in primary mainstream schools?)

I was intended to answer this main question by finding answers to the following sub-questions:

- How the Czech language teachers identify their students preferred learning styles?

- To what extent do the Czech language teachers take into account the preferred learning styles of their students with dyslexia, and what teaching practices have been used?

- Where account has not been taken regarding identifying preferred LS what methods teachers use to develop teaching methods?
- What supports the Czech language teachers in responding to their students preferred learning styles?
- What are the barriers that face the Czech language teachers in applying LS?
- How do Czech language teachers involve students with dyslexia to know and use their preferred leaning styles?

3.2 Data collection

Based on the nature of this case study, as being interpretivist and exploratory in searching for the different views regarding the issue of LS. I decided to follow Robson's advice (1993) which states that those who decide to conduct a case study should use 'multiple source of evidence' in order to reach different views of the researched system, and that commonly the researcher can use different data collection methods from quantitative to qualitative to reach his/her aim. Hence, I decided to use different methods of data collection to reach my aims, I used questionnaires, interviews as well as classroom observation, document analysis, and the school's website to look at their general activities for students with dyslexia. These methods of data collection involved the views of the teachers, special education teacher, the views of the principle of the school, and the psychologist from the special centre of dyslexia who supports the school. In this way some form of triangulation could be reached and it was hoped that these various methods of data collection will enrich the results of my study.

In short, the study was carried in a primary basic mainstream school in (Prague 1) in the Czech Republic using different methods of data collection to make sure that what has not been covered by one method should be granted by another. Therefore, a total of 5 interviews were carried including the interview of the special teacher and the psychologist of the counselling special centre, and 6 questionnaires were answered by the total of 6 language teachers at primary level, who also were class teachers meaning that they also taught all subjects. Classroom observations were conduct

during school hours from 8am – 2pm.Data collections was done during the month of May and analysis of data was done in subsequent months.

3.2.1 Setting

The basic school involved in this case study consisted of many foreign students, so it's well equipped with programmes to cater for the needs of students who have Czech language as a second language; they also have programs for gifted students. Children with dyslexia at this school go for assessment at the Psychological Educational Counselling Centre to get appropriate diagnosis and assessment and who also provide individuals education plans (IEP) to mainstream classroom teachers. IEPs help classroom teachers to make the appropriate accommodation for their students with special needs in the 'normal classrooms'. The psychologist also visits the schools when requested to solve problems concerning students' behavioural, disciplinary and educational issues. Many students who have been identified as 'dyslexic' get assistance to support them several times of the week in their reading and writing inside the classroom. Nevertheless, students also get support from the special teacher at specific times of the week in a 'special class' regarding their language problems from the special education teacher, who provides learning and cognitive support and she has 8 years experience on supporting different children with special needs and has also served as special needs advisor for the mainstream teachers.

3.2.2 Sampling strategy

Based on the theories and the literature review in the field of dyslexia, suggesting that most children with dyslexia even if they face problems in Mathematics, their problems starts mainly with reading and writing (Elliot & Place, 1998). Hence, the strategy of my sampling was to involve all classroom teachers who had helped students in the subject of Czech language regardless of the availability of students with dyslexia in their classrooms during this current year. Though (Cohen et al, 2007) believes that sometimes it is good in qualitative study to choose a sample on the basis of possession of particular characteristics and experience or professional knowledge about a topic being examined, which is in this case dyslexia. At the start of my data collection I preferred to stay away from this strategy, as to me to be able to identify or to deal

with LS is one way of accepting differences whether the knowledge that a teacher might have is about dyslexia or any other special needs. So, I started by following Jenes (2002, p238) advice on sampling procedures in qualitative research by involving "*Maximum variation sampling* which aims to capture as wide range of 'qualities' or phenomena as possible". Hence, at the procedure of the questionnaires I involved all the primary language teachers who were in total 6 teachers and all agreed to participate in my study.

Then at the second stage of my sampling procedure I followed (Cohen et al, 2007) advice, which I have mentioned before and I selected teachers according to their professional knowledge, experience and skills in dealing with issues related to dyslexia and LS for more in-depth interviews. Indeed at this stage it also depended on the willingness of the teachers to participate on the interviews and cooperation was made with the school to choose the sample. Gray (2004) suggested that a researcher might benefit from understanding different views of a phenomenon and construct theories and models from data by involving smaller samples in in-depth interviews. Hence, I interviewed two language teachers who had students with dyslexia in their classroom, one with long experience the other one with less experience in teaching, the teachers taught grade 3 & 5 respectively. I also interviewed a special needs teacher as she is the one that I thought might add something different to this research compared if I add more teachers. (Brantlinger et. al, 2005, p198) stated that 'if recent interviews discern the same information given by earlier respondents, there is no need to interview more people', since the two teachers provided different views regarding the implementations of LS, I decided that it would be more valid to interview a special need teacher rather than more teachers to get a third view on the implementations of LS.

Nevertheless, the views of the psychologist from the dyslexia centre who played an active role in providing ways to deal with students with dyslexia according to their different needs and the views of the school principle were also included in this study, to form a wider view of the provision provided for students with dyslexia, which also acted as a form of triangulation and will be discussed later in this chapter under the heading of validity and reliability.

In conclusion, the participants of the study were as follows:

- The principle of the basic school.
- All language teachers who taught primary level grades (1-5) in total (6 language teachers).
- 2 teachers at primary level who had students with dyslexia in their classroom (teaching grade 3 &5)
- The schools' Special educational teacher / 'advisor', who also supported students with dyslexia with their language and cognitive problems,
- A Psychologist from the special counselling centre.

3.3 Techniques of data collection

As mentioned earlier, data was collected from different sources: mainstream language teachers, special teacher, psychologist and principle of the school, this was done via three different instruments: questionnaires, classroom observation and semi-structured interviews.

Conducting a study on a school that is based in a country which we have common language as English does not guarantee that all teachers at schools could speak English, and this was the case at this school. Therefore because of the language barriers I had to make use of an interpreter during the whole time of my research even at the time of classroom observation.

3.3.1 Questionnaires

Since it was important to know the general ideas about what all language teachers know about LS but having limited time for research I decided to design self completed questionnaires. Gray (2007) stated that Questionnaires arguably could be close- or open-ended, and the logical order of questions is difficult to predetermine, however it is one of the efficient ways in terms of time and effort. On the other hand, Robson (1993) suggested that for questionnaires to be efficient it should be well structured, and the use of computer coding or analysis should be used to shorten the time needed to code and analyze responses. Therefore, I designed my questionnaires to included

open and close ended questions; which were divided into sub sections such as teachers' background and qualifications; their background on LS theories; strategies they use to meet their students LS, and their views on the advantages and disadvantages of meeting their students needs through applying LS. Some questions also consisted of Likert-type format which employs a five point Likert-type format of response from "strongly disagree" to "strongly agree" and a choice of (I don't know) was also provided. This served of a great advantage as some of the teachers did choose (I don't know) to clarify their acknowledgment of not knowing or not being at the extreme ends of agreeing or disagreeing with certain aspects of the points covered by the questionnaires. This design also made it easy to analysis my data using computer analysis; it also increased my chances of quantifying some of my results which added some validity to the results.

Nevertheless, the questionnaires were checked by two of my critical friends to check if the questions were related to the main topic of the research and then it was checked by a tutor at Charles University before and after the translation. The questionnaires also were given to one of the language teachers at the school to double check the clarity of the questions, and changes were made before distributing it to the participants. Moreover, the letter of the questionnaires assured confidentiality and it was made clear that names were not required to complete the questionnaires. The purpose of the questionnaire was also clearly defined and explained and the definition of some terminologies for example the meaning of 'learning styles' was also provided (See Appendix 1 (a) & 1 (b) for the sample of the information letter, questionnaires in Czech and English respectively).

3.3.2 Observations

Observation can lead to deeper understanding of certain issues covered by questionnaires or interview alone, as Agnew and Pyke (1982) cited in Robson (1993, p191) puts it in this way " on a questionnaire we only have to move the pencil a few inches to shift our scores from being a bigot to being a humanitarian. We don't have to move our heavy weight behaviour at all". Therefore, using observations alongside questionnaires provided me with not only a chance to clarify and explore the real

world of school practice; rather it also acted as a supportive technique in addition to the questionnaires results. According to Robson (1993, p192) observation can be used as an *exploratory tool* but can be better used to validate or to confirm the messages obtained in an interview or questioners, hence it can be considered as *a supportive technique*.

In the case of this study observation was also used for the aim of providing visual and verbal data evidence on teachers perspectives regarding LS and it was used to validate the opinions of teachers which was obtained through interviews and questionnaires. (Gray, 2004, p238) suggested that *"Observation provides an opportunity to get beyond people's opinions and self-interpretations of their attitudes and behaviours towards an evaluation of their actions in practice".* Nevertheless, (Jensen, 2002, p240) referred to Observation as *"a set of research activities that involve the continuous and long-term presence, normally of one researcher, and generally in one limited context".* However, like any other data collection method it was necessary to plan and conducted the observation in systematic way in order to achieve reliable results.

Procedure for the observation

Acknowledging the situation of the school and the time limit of my study, I was able to observe two lessons of classroom teachers who taught grade 3&5 and one lesson with the interviewed special need teacher. According to (Ghesquie`re et al., 2004, p175) in a qualitative case study the researcher does not *"measure in the quantitative sense of the word. Rather he or she evokes, describes, evaluates, compares, and creates images that give readers the impression that they have also been present".* Yet, due to the limitation of common language with the teachers it was necessary to have a translator at the time of classroom observation, to translate teachers' instructions and their use of different activities and materials, in order to make sure that description will be complete and clear.

Furthermore , time limitation and the complexity of analysing observation data required the use of formal approaches to observe the classroom activities, as this is also according to Robson (1993) gives more reliable and valid findings. So I used "Descriptive Observation". Spradley (1980) cited in Robson (1993) stated that

"Descriptive Observation" aims to describe the setting, people and the event that have taken place, it's one of the ways of helping others understand what happens in practice and he described different dimensions on which data can be collected such as space, activities, events, goals and feelings . So, I used note taking, diary keeping and I prepared set of targets that I wanted to observe like the way teachers empower their students to use their LS through using specific materials. Yet, through my literature review I didn't find one agreed form for classroom observation relating to LS, rather some researchers like Robson (2002) agreed that there is no one agreed form of observation. Therefore, I developed a form which I thought it covered all aspects of my research questions such as materials used, the seated area of the students with dyslexia and the activities that involved the different ways of learning such as audible or tactile, as well as the teachers' interaction and movement during the lesson (see Appendix 2 (a) for a copy of the observation form).

Video tape was intended to be used at this procedure however, since it attracted students' attention it was stopped and confirmation of the activities of the observations was discussed and confirmed with the translator and the teachers during the interviews.

3.3.3 Interviews

To gain more depth understanding of teachers' views regarding the use of learning styles with their students, it was necessary to collect more depth views which can only be done through interviews. According to (Cohen et al., 2007) in an exploratory study 'interviews' can allow respondents to use their freedom of expression and to interpret their world in a flexible and spontaneous manner. Robson (1993, p229) also described interview as adaptable way of finding things out, and he considers it as *"a conversation with a purpose"*. In this study interviews were conducted with two of the teachers who answered the questionnaires and one special education teacher and advisor at the school, in addition to the interviews of the psychologist and the principle of the school. During the interview of the principle of the school it was possible to gain all the information needed regarding the school policy on accommodating for students learning styles and for the special accommodation provided for students with dyslexia,

and since there was no specific school policy regarding this matter, the document analysis of the school policy was not carried.

Moreover, (Brantlinger et. al, 2005, p198) stated that in a qualitative research *"people are considered to be dynamic and diverse; hence data collection is most productively done in creative ways"*. This means also means following the procedure of Robson (2002) which involves using the protocol of interview in a flexible way rather than using rigidly structured interviews, hence this current study used semi- structured interviews with all the participants. The semi-structured interviews investigated how teachers identify their student's LS; whether they use their identifications in designing their teaching methods or materials and how do they involve the students in using their preferred LS. Nonetheless, during the process of interviews questions have been modified and added according to the response of the participants. For the general guidelines of the semi-structured interviews which involves the main questions see appendix 3 (a).

Additionally, since interviews have also been criticized by some researchers like (Jensen, 2002, p240) and Robson (1993) for the fact that *" people do not always say what they think, or mean what they say"* it was necessary to use more than one method to get the results of this study such as questionnaires, classroom observation in addition to interviewing someone outside the field of teaching 'a psychologist " and document analysis of the IEP report, as a form of triangulation of the results. According to Gray (2004) and Robson (2002) one of the ways of overcoming the challenges that might face an interviewer is to use it effectively in conjunction with other methods and to consider the ethical consideration of interviewers, such as to grantee the anonymous of the participants, yet most of these ethical issues has been covered during this study as it will be apparent in the following sections.

Procedure of conducting the interviews

Interviews of the teachers were held straight after the observation of the classroom, which allowed an opportunity to clarify points that were observed during the lesson in addition to the actual aim of the interview. The times for the Interviews were about 30 to 40 minutes per session depending on teachers' time schedule. Confidentiality was assured with regard to personal opinions expressed and consent was obtained prior to video recording the sessions. A translator was provided even when some of the

teachers could speak a little English, in order to make sure that all their questions and answers were clear. In addition, interviews were videotaped after taking the consent from the participants for the purpose of double checking with a second translator to make sure that none of the responses were overlooked or misinterpreted and this aim was verified to all participants prior to the interview day, this also counts towards the validity and reliability of my study. Salient points were double-checked and verified with teacher after the end of each interview session.

3.3.4 Document analysis

Document analysis in this study was limited to analyzing the groundwork for individual education plan from the Educational-Psychological Counselling Centre (appendix 4) which was provided to the teachers of the school at the process of intervention. Hence, the main components and the details about the points which were related to learning styles were observed. This was also done mainly as a form of triangulation, and to provide some evidence that some aspects of learning styles were actually covered by the school and was considered as important at the stage of intervention.

3.4 Procedures for data analysis

The analysis of quantitative data of this study which was obtained from the questionnaires was much easy compared to the qualitative analysis. For the quantitative analysis of the questionnaires the data was analyzed in a statistic way using tables and looking for patterns of how many teachers agreed or disagreed and common results were analyzed to form the answers of the main questions of this study.

On the other hand, the analysis and interpretation of the qualitative data was carried throughout the process of the research. Though according to Robson (1993) there is no specific way of analysing qualitative data, yet according to (Cohen et al., 2007, p461) in qualitative analysis there is a need for interpreting "the participants' definitions of the situation, noting patterns, themes, categories and regularities". In addition to this, (Ghesquie`re et al., 2004, p176) also suggested that accurate, complete, and dated record of the data should be kept throughout the research procedure, as such way of collecting and analysis of data will increases the study's internal reliability. Therefore the procedures of (Cohen et al., 2007) and (Ghesquie`re et al., 2004) were taken into consideration while carrying this case study and notes were also taken during observations, and reflections on video tapes (e.g., during the interviews) were made to double check the results in comparison to the notes made during the 1st analysis of the interviews and during the second double check translator.

Furthermore, the guidelines of (Miles & Huberman, 1994, p10) on the analysis of qualitative research were also used to lead the procedure, as they see qualitative analysis as consisting of three stages: data reduction, data display and drawing conclusion / verification. They explained data reduction as being a process of simplifying and transforming the written notes and transcriptions and relating it to the research questions, by summarizing the main results, ideas, coding and making up clusters. The second step is to display data in an organized interesting form by using charts, graphs or mind maps. The third stage which actually occurs from the start of the data collection, as the researcher right from the beginning can observe similar patterns, is the conclusions and verification and is achieved by noting patterns, explanation, as well as noting the reflections of the responses. Though some

conclusions were obtained throughout this case study the final conclusions were made at the end of the data analysis.

To conclude, though (Cohen et al., 2007, Robson, 2002; & Bryman, 2008) all agree that there is no one correct way of data analysis; I had to follow some general points to analyze the data for this qualitative study. These guidelines I observed from the various literature review of data analysis such as ((Cohen et al., 2007; Bryman, 2008; Ghesquie`re et al., 2004; Robson, 2002; Miles & Huberman, 1994) and I can sum them to:

- Taking notes right from the beginning of data collection followed by making regular reflection on my notes and on the videoed data, this lead to different interpretation of the findings.

- Using codes for categories based on research questions and themes that emerged from the data, this helped to reach the aim of data reduction and focusing on the main aims of the study.

- Following regular systematic analysis by noting results using my computer.

- Looking for patterns, similar conclusion and providing logical connections between patterns.

- Comparing some of the results whenever it was required.

- Using charts or graphs to display results in more simple understandable way, this also helped to draw my conclusion in a simplified systematic way.

3.5 Validity and reliability

For "something" to be counted as knowledge, it has to have some satisfactory level of certainty or validity (Lund, 2005). Hence, *"validity issues are fundamental in knowledge construction, and such issues are focused upon in methodological and substantive research"* (Lund, 2005, p120). (Lund, 2005, p122) also refers to validity as *"the certainty of inferring that a study result is non-trivial (i.e. is systematic—non-random—and of interesting size)"*. On the other hand, Robson (1993, p67) stated that "unless a measure is reliable, it cannot be valid ". Therefore for my study to be valid it has to be

reliable. The reliability of this study was achieved through using *member checks*: where I had to provide to the participants during my interviews a review of my observational notes to confirm the accuracy (or inaccuracy) of my observations. In addition, some transcriptions of the interviews were discussed with the participants prior to analysis and interpretation, as according to Robson (2002) and Bryman (2004, p273) this guarantees credibility of the research and is considered as internal validity, and by following this procedure I was able to make sure that I understood correctly the perspectives of the participants.

On the other hand, (Brantlinger et. al, 2005, p201) suggested some *"Credibility Measures for Qualitative Research in the field of researching SEN"* some of which they defined as ' Triangulation' as they defined it as *"a search for convergence of, or consistency among, evidence from multiple and varied sources"*. So they introduced the following forms of triangulation:

• *Data triangulation*—use of varied data sources in a study.

• *Investigator triangulation*—use of several researchers, evaluators, and peer prove.

• *Theory triangulation*—use of multiple perspectives to interpret a single set of data.

• *Methodological triangulation*—use of multiple methods to study a single problem

For this case study 'Theory triangulation' might not be guaranteed, as being new to this field of LS and having short time to investigate and carry this research might not cover all the interpretations of the theories and prospective. However, I believe in this limited circumstances (Data, Investigator & Methodological triangulation) has been achieved. For data triangulation different participants were involved in the research, as mentioned mainstream teachers, special teachers & the psychologist were all interviewed. In addition, methodological and investigator triangulation were achieved through using multiple methods of data collection from qualitative and quantitative methods and the instruments and transcripts and findings were also evaluated by different evaluators from peers, one of the teachers at the school who was not involved in the study as a participant, my tutor as well as the second translator before carrying the procedure of data analysis. Nevertheless, the previous procedures for sure had allowed me to meet the definition of triangulation provided by (Bryman, 2004, p274) which states that *"Triangulation is a process of cross-checking findings"*.

3.6 Ethical issues

Thinking about ethics of research even before starting conducting the actual research is one of the crucial considerations in any study especially on a research which is carried in a real world involving people and things that might affect them (Oliver, 2003 and Gray, 2007). For this study I can sum up the ethical consideration according to the ethical themes developed by Oliver (2003):

- Anatomy and confidentiality: this was granted at all times to all participants and starting from the stage of data collection to the stage of analysis and reporting the findings.

- Clarity about the research: this was achieved by providing enough information about the aims and the time line of the research and what is expected from the research to the principle and the teacher who was in charge of helping with organising the research (see copy of the letter of explanation appendix 5), this was also achieved by stating the aim of the research at the beginning of each interview.

- Clarifying the use of the collected data, this was done on the cover sheet of the questionnaires and at the beginning of each interview (appendix 1).

- Informed consent from participants such as teachers which was after the (school approval) to participate in study;

In addition, it was made clear to the participants that they can overdraw from the study at any stage. Carlsson and Paterson et al. (2007) suggested that researchers should not always assume that informed consent is long standing throughout the study, hence researchers should at certain point ask the participants for their continues involvement. Since all interviewed teachers were willing throughout the interviews to be involved, with some of them at the end commenting on their availability and willingness to provide more information in case of the need of any more information (see the transcript at appendix 3 (e)) it was a good sign that some of the ethical consideration has been achieved. Finally, the research findings were also presented to the school where this study took place.

3.7 Limitations

Since this was a small-scale research within a limited period, it was not possible to select a large sample for the purpose of generalization. It was intended for this research to have two case studies however, following the limitation of time, and one of the schools giving very late response regarding the acceptance of the present research; it was more sensible to finish off with one case study and it was not possible to carry out pre and post-tests or extensive surveys involving large samples in school settings. In addition, though it will not be possible to generalize the findings of my study, yet collecting data from one school have also improved the results of this study, as it eliminated the chances of comparing the results of two schools which might have enforced the research to be judgmental about the application of LS in the different schools, which I was not in favour of it, after all deciding to carry the study at one school was of great advantage to my deep exploratory study.

Furthermore, language was another form of limitation of this study where interviews with teachers were conducted via translators therefore, as (Robson, 2002) pointed that translations may pose a problem as meanings could be misinterpreted. However, I overcome this limitation by using triangulation, careful interpretation and "member checking" throughout the study procedure, with the hope that none of valuable views of the teachers have been missed or miss interpreted.

3.8 Summary

This chapter discussed how the perspectives of teachers on teaching students with dyslexia using learning styles have been achieved using qualitative approach and interpretive framework. Results were obtained using qualitative and quantitative methods of data collection, where questionnaires, classroom observations and Semi-structured interviews served as primary data collection tools and document analysis and an interview of the psychologist were used as a form of triangulation.

<u>Chapter four: data analysis</u>

Introduction

Following the methods of data analysis that was explained by this study in chapter 3 which calls for data reduction, data representation and drawing the final conclusions. The aim of this chapter will be to present the data in simplified way which at the end will lead to final conclusions.

4.1 Procedures for data analysis

"Analysis involves the process of breaking down data into smaller bits, and then beating the bits together, for the aim of describing our data to reveal its' characteristics elements and structure" (Dey, 1993, p31). So in this part of the study you will be able to observe some aspects of description of the results of questionnaires, interviews as well as the observations and document analysis in simple small structures. However since descriptions of the results of any study is not enough to be called analysis of data (Robson, 1993 & Dey 1993) the aim was to go beyond the journey of descriptions hence connections between some concepts will also be reviled. Therefore, the analysis of the results started by keeping the main questions in mind, hence coding was used and then the analysis was moved to more general issues that in some cases were not related directly to the main questions, as this enabled to make sure that all the important themes that has emerge from the results were not overlooked. This means that the procedure of this chapter will be to analyse and present the results in to sub-chapters according to the six main questions of the study, were both results of the quantitative and qualitative methods will be presented according to its relation to the research questions.

It's essential to mention that the quantitative analysis was carried after the completions of the questionnaires, but the analysis of the qualitative data started right at the beginning of the research, as it was possible to see the possible emerging themes from the study, however it was handled with open mind until the final step of all data collection, then the procedure was to read the transcripts of the interviews and observations notes several times **(see appendix2&3)** for the interviews and

observation notes respectively. The main questions on how teachers identify their students learning styles, how do they meet the different learning styles of their students, the barriers that face them at the stage of identification and what could help them to meet the needs and learning styles of their students were considered as four themes that lead the procedures of the qualitative analysis. At this stage coloured codes were used to indicate the similarities of the responses and for the process of simplifying the analysis. The codes then were analysed according to the sub questions of this research. Initially, the codes led to several themes, however similarity, contrasts, patterns and trends were also observed. Therefore it was possible to finally put all the findings of the qualitative and the quantitative under the main categories of my research questions.

4.2 Background of the participants

4.2.1 Background of the teachers who contributed on the questionnaires

A total of 6 questionnaires were distributed to a total number of the school language teachers at primary level. 100% of the participants samples contributed to the answers of this study as a total of 6 questionnaires were distributed and all were returned to the researcher. The questionnaires sample consisted from 2 males and 4 females as shown in (Table 1) below. On the first part of the questionnaire personal characteristics and demographic information were required such as gender, teaching experience and the numbers of students with dyslexia in their classrooms. Some relevant characteristics about the sample are presented in (Table 1 & 2)

Table 1: shows the numbers of primary language teachers participated in answering the questionnaires of this study

Gender	Frequency	percentage
Male	2	33.33%
Female	4	66.67%
Total	6	100%

Table 2: shows the years of teaching experiences for the participated teachers.

Years of teaching experience	Male	Female
Less than 5 years	-	2
5- 10 years	-	1
More than 10 years	2	1

All the teachers of this sample had obtained master degree with only one of the females with a bachelor degree. Though some of these teachers had different specialist for example one specialized in teaching math's and sport for 3rd year students, they are all considered as language teachers, in addition at primary level grades (1-5) they teach all the subjects such as (math, music, art, work tuitions, physical education, geography) including Czech language. As can be seen from (Table 3) only one of the 6 teachers who didn't have any students with dyslexia in his classroom, hence he was not included at the stage of interviews or classroom observation.

Table 3: shows numbers of students with dyslexia in each classroom of the participants, (Male Teacher= MT, Female Teacher= FT)

Participated Teachers	MT1	MT2	FT1	FT2	FT3	FT4
No of students with dyslexia	4	-	2	2	4	1

4.2.2 Background of the interviewed teachers and their classrooms

Further samplings of 2 Czech language classroom teachers and one special teacher for semi-structured interviews were selected based on their responses in the questionnaire. In addition, classroom observations of the three selected teachers were also conducted, and for the aim of triangulation a psychologist and the principle of the school were also interviewed and a data analysis of the report provided by the special centre was also analyzed.

Through observation and interviews it was possible to have a general idea about teachers' background and their classroom practice. As I mentioned before that I observed three lessons for teachers who had students with dyslexia in their class, were two of them being language and classroom teachers and another one who was a special teacher see (Table 4 & 5).

Table 4: Background of the interviewed teachers

Teachers background	Teachers knowledge on learning styles Or dyslexia	Years of teaching experiences
Grade 3 (G3)	Learnt about it at university in SEN course +have in-service training in dyslexia	11 years
Grade 5 (G5)	-	1& half year
Special class (SC)	SEN qualification so have to deal with LS has also qualification in behaviour difficulties	8 years

Table 5

Features of the Classrooms that have been observed	No of students	No of students with dyslexia	Availability of assistance in the classes
(G3) Grade 3 class	23	4	-
(G5) Grade 5 class	26	4	2
(SC) Special class	2	2	-

For detailed notes on the formal classroom observation and classroom design of the observed classes see **(Appendix (2b-2d))**. Generally Students in the classrooms were seated in rows and sometimes were involved in group work according to their needs either working with assistance or with the class teacher in the case of the unavailability of the assistance, **(Diagram 1)** provides an example of one of the observed classroom settings.

Diagram 1
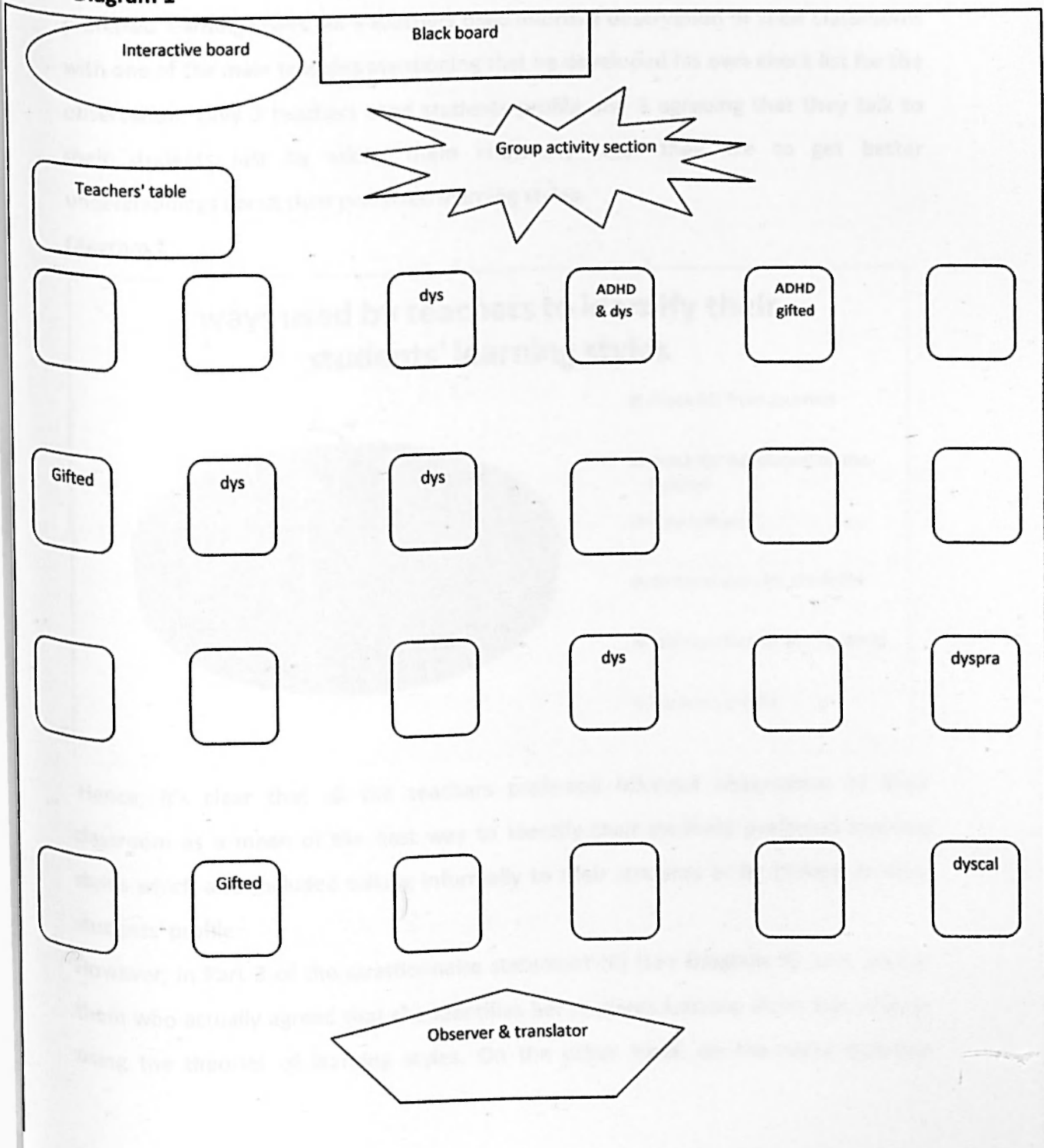
4.3 Data presentation

4.3.1 How Czech language teachers identify their students preferred learning styles?

The answer to this questions was provided by part 2 (c) of the questionnaire and the results are shown in **Diagram 2**. None of the teachers used formal checklist or questionnaires based on any theory or research to ask their students about their preferred learning styles. All 6 teachers used informal observation of their classrooms with one of the male teachers mentioning that he developed his own check list for the observation. Only 3 teachers used students profile and 3 agreeing that they talk to their students just by asking them informally what they like to get better understandings about their preferred learning styles.

Diagram 2

ways used by teachers to identify their students' learning styles

- check list from journals
- check list developed by the teacher
- observation
- qustionnaiers for students
- talking informally to students
- students profile
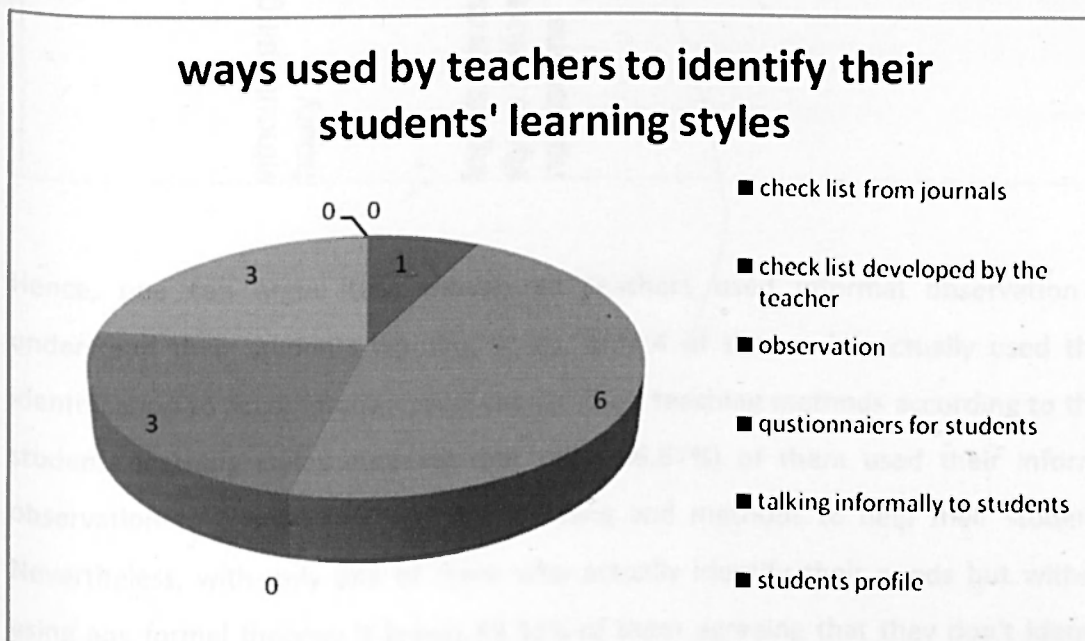
Hence, it's clear that all the teachers preferred informal observation of their classroom as a mean of the best way to identify their students preferred learning styles which also included talking informally to their students or by looking at their students' profile.

However, in Part 3 of the questionnaire statement (6) (see **Diagram 3**), only one of them who actually agreed that she identifies her students learning styles but without using the theories of learning styles. On the other hand, on the same question

statement (7) only 4 out of 6 of the teachers agreed that they think about their students learning styles before they design their teaching methods.

Diagram 3: Identifying students' learning
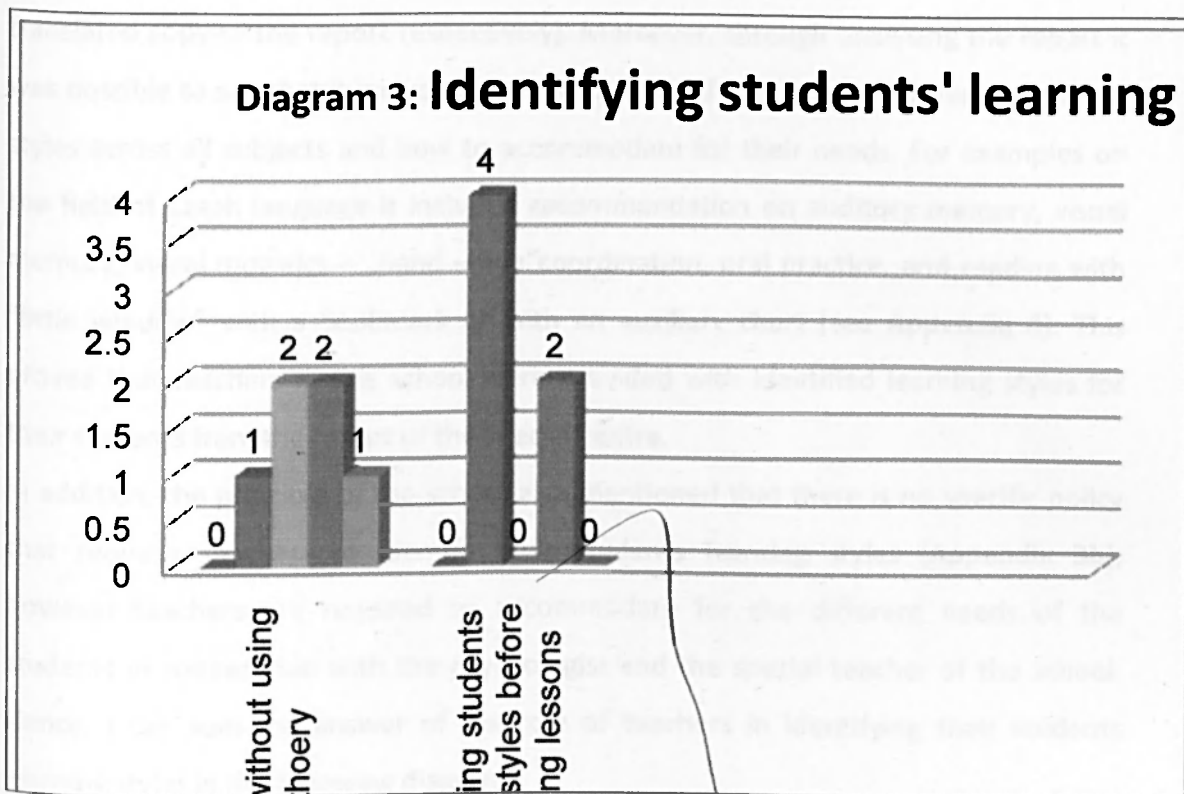
Hence, one can argue that though all teachers /used informal observation to understand their students learning styles, only 4 óf them who actually used their identification to accommodate, and change their teaching methods according to their students learning styles meaning that only (66.67%) of them used their informal observation to change their way of teaching and methods to help their students. Nevertheless, with only one of them who actually identify their needs but without using any formal theories it leaves 83.33% of them agreeing that they don't identify their students learning styles even without using any theory. Hence, the confusion of this high percentage called for the use of triangulation through clarifying this matter through interviews and document analysis. As such, from the interviews of the teachers and the psychologist it was concluded that the system for the school is that teachers only have to observe the needs of the child which leads to know some indication of their preferred learning styles , however they don't have to identify it formally or in written as it's the responsibility of the psychologist at the special centre,

who provides a report on a specific child to help teachers to know the students' learning style (see **Appendix 3&4** for interviews of teachers, the psychologist and a translated copy of the report respectively). Moreover, through analysing the report it was possible to see that it included some indication of the students' different learning styles across all subjects and how to accommodate for their needs. For examples on the field of Czech language it included recommendation on auditory memory, visual memory, visual motorics – „hand – eye"coordination, oral practice, and reading with "little window" with a bookmark or with an auxiliary chart **(see Appendix 4)**. This proved that teachers at this school were provided with identified learning styles for their students from the report of the special centre.

In addition, the principle of the school also mentioned that there is no specific policy that requires teachers to identify their students learning styles **(Appendix 3b)**, however teachers are required to accommodate for the different needs of the students in cooperation with the psychologist and the special teacher of the school. Hence, I can sum the answer of the role of teachers in identifying their students learning styles in the following diagram.

1) Class Teacher concerns about Childs' learning 2) Teacher observes the needs of the child

↓

Teacher discuses the needs of the child with the special teacher and an advice from the psychologist also can be sought

↓

Psychologist assessment and advice is provided to teachers and the special teacher in a report called "Groundwork for Individual Education Plan" **(Appendix 4)** The report includes some of the preferred learning styles of the child

↓

Teachers provide support and make changes in their plans and methods according to the psychologist report

4.3.2 Teachers experiences in identifying their students learning styles

In Part 4 of the questionnaires teachers were asked about their experiences in identifying their students learning styles, the statements were consisted from 4 positive experiences and 4 negative experiences however the sequence of the statements were not ordered in a systematic way, for the aim of eliminating the possibility of teachers choosing random answers and the results were as follows:

Diagram4: Teachers experinces with identifying students' LS
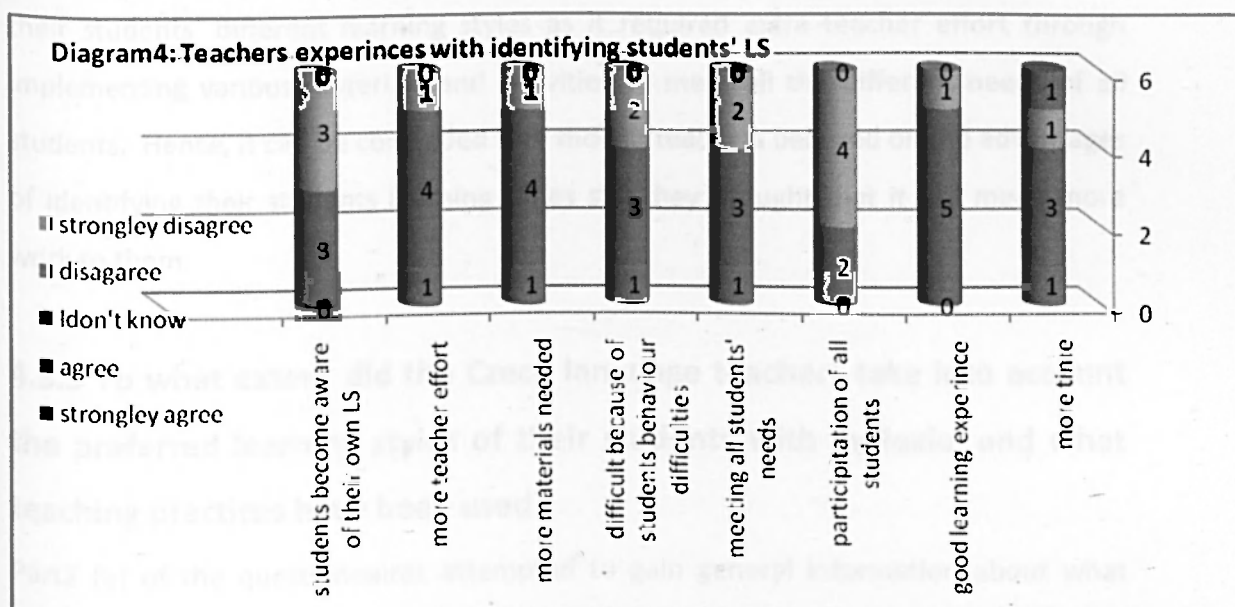
- One of the teachers answered the statements of all this part as he didn't know.
- Only 2 of them agreed that it encourage all students to become participants and the other 4 didn't agree or disagree with the statement.
- Only 3 agreed that it can make their students aware of their own Learning styles, and with the other 3 commenting as they didn't know.
- 4 agreed that by identifying their students learning styles they will be able to meet the needs of all students and 2 didn't agree or disagree with the statement.
- On the other hand 4 of them agreed that to identify their students learning styles will need more time to plan and do different activities and it will also be difficult to achieve because of some students' behaviour problems.
- 5 teachers agreed that in their experiences identifying their students learning styles makes learning a good experience for all children. Similarly, 5 of them agreed that

identify their students learning styles will mean more materials to be provided for the different activities, hence more teacher effort. Whereas during the interview of (G3) teacher he looked at this issue in a different angle as he said *"by knowing or identifying learning styles it enables me to provide different activities according to the majority"* hence it helped him to plan better lesson.

From the outset, the results shows that though majority of the language teachers 4 out of the 6 believed on the advantages of identifying their students learning styles, yet 5 of them have encountered some obstacles and challenges after the identification of their students' different learning styles as it required extra teacher effort through implementing various materials and activities to meet all the different needs of all students. Hence, it can be concluded that though teachers believed on the advantages of identifying their students learning styles still they thought that it will mean more work to them.

4.3.3 To what extent did the Czech language teachers take into account the preferred learning styles of their students with dyslexia, and what teaching practices have been used?

Part2 (b) of the questionnaires attempted to gain general information about what aspects of learning teachers take into account before they design their teaching methods, for this question different teachers answered it differently as instead of four of them answering using the rank 1-5 from most important to least important as required by the question, they used the rank 1-3. Hence, this raised some issues at the stage of analysis but it was overcome by analyzing first the answers of individual teachers who used 1-3 rank and ranked them to three main categories (most important (1), important but not the first thing to think about it (2), least important(3)) and for those who used 1-5 scale it was analysed as (most important according to those who ranked any statement by number (1), important but not the first thing they will think about for numbers (2, 3, 4) and least important for those who chose number (5) for any statement . thus, the results were as shown in **Diagram 5**

Diagram 5
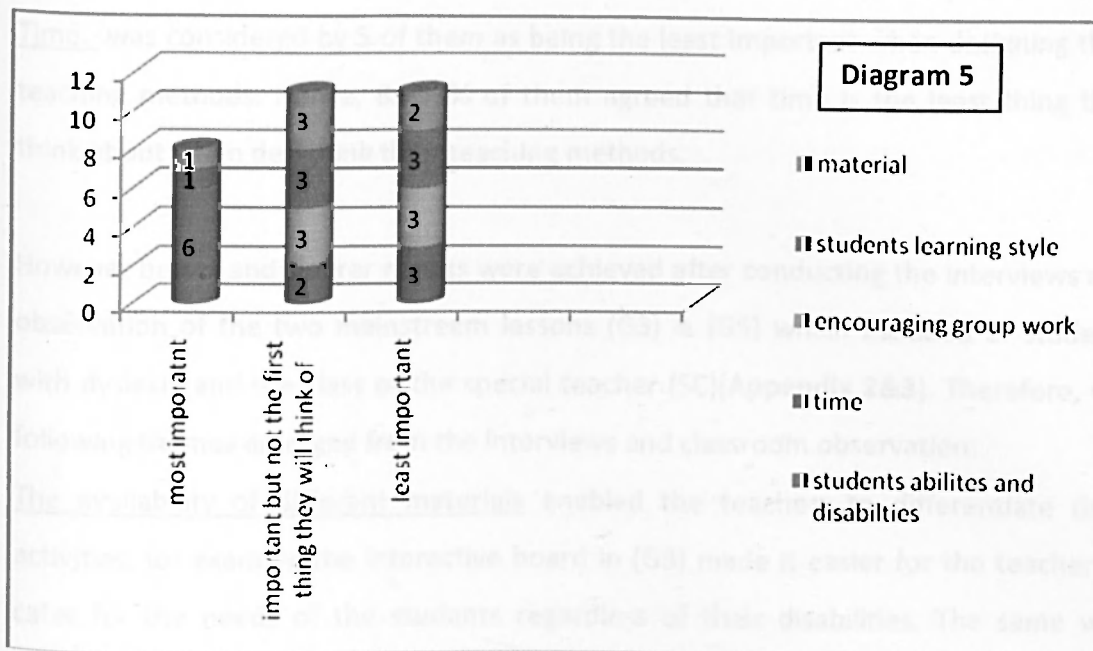
As it can be seen different teachers had different opinions regarding this issue, however generally it's possible to observe the following themes from the results:

- Students' abilities and disability: All 6 teachers which mean 100% of them agreed that the most important thing to think about before designing any teaching methods is to think about their student abilities and disabilities. With one of them choosing materials and time to be all in the same level as identifying students' abilities and disabilities.

- Learning styles and group work: 3 teachers considered Students learning styles and encouraging group work as least important &3 considered it as important but not the first thing they think about it. This meant that, none of the teachers thought that learning styles or encouraging group work is the most important thing to think about before designing their teaching methods. . In other words, 50% of the teachers consider learning styles and encouraging group either least important or important but not the first thing that they will think about in designing their teaching methods.

- The use of materials: Only 2 teachers chose that they think about the materials which are available for them to implement their ideas before planning and 2 of them considered it as least important.

- <u>Time:</u> was considered by 5 of them as being the least important when designing their teaching methods. Hence, 83.33% of them agreed that time is the least thing they think about when designing their teaching methods.

However better and clearer results were achieved after conducting the interviews and observation of the two mainstream lessons (G3) & (G5) which included of students with dyslexia and the class of the special teacher (SC)(**Appendix 2&3**). Therefore, the following themes emerged from the interviews and classroom observation:

- <u>The availability of different materials</u> enabled the teachers to differentiate their activities, for example the interactive board in (G3) made it easier for the teacher to cater for the needs of the students regardless of their disabilities. The same was observed during the special class (SC) were the teacher used different materials and activities to meet the needs of the students. Yet, in the case of wither having different materials in the classroom can help to meet the learning styles of all students; teacher (G5) used less materials and activities in her practice and she remarked regarding this matter that " *because of this amount of students who some have ADHD as well, it would be very hard to use computers in order to decide whose turn is it and only one student can work with computer of interactive board"*. However, through my classroom observation of the other class (G3), the teacher used the interactive board with students who had dyslexia and with other who had behaviour difficulties at the same time in one activity and it worked very well for all children. Similarly, (SC) teacher mentioned in the interview the importance of having various supported material by saying *"for example one is working with computer and I work with another child, thanks to the computer programmes that made it possible to help them both"*

- <u>Including different activities which requires students to use their stimulation</u> of auditory, visual perception, cognitive functions, concentration, fine motor skills etc helped the students to enjoy their time in learning not only the ones with dyslexia rather for the whole class and this was observed in better level in (G3) and in the special class (SC). In (G5) the learning through play was prevailed and it worked well for certain time, however from the observation it could be seen that since the learning was concentrated mainly in auditory perception, not all students felt involved during

the whole lesson. However, saying so it is fair to mention that <u>the availability of assistances</u> in G5 helped those students with dyslexia to have more time to perform tasks but still it was more as one way instruction -teacher to student- majority of the time.

- <u>All the lessons and activities were well planned by the three teachers</u>, however there was little evidence of giving chance to students to choose the type of activities they preferred even at the classes that seemed to meet the learning styles of all students like in the case of the (G3) and (SC).

- <u>All three teachers worked to their potential in trying to reach the needs of their students according to what they believed to be good teaching</u>. In explanation, here are some of the teachers' remarks regarding meeting the needs of their students with dyslexia:

- (G3): *"I use the LS that suit the majority of the class, so since I know most of them like to move then I prefer to use more active activities and stay away from the boring ones".*

- (G5): *"I love teachings it's like my hobby", "I don't ask them much, they use computer at their homes a lot and I prefer classic reading and writing and games but using video hmmm I don't like it".*

- (SC): *"all of them they like kinaesthetic activity, they always like activity to run and collect something, as such kids have to consume their energy"*

- The psychologist: *"With the smaller kids who have dyslexia the idea is that they need to revise, practice and re-learn all the sentences and practice all the senses, so the approach is like multisensory so they have to work in a progress of all of them, we have to re-educate those are not suppressed or limited".*

Therefore, since I believe that in many cases teachers <u>knowledge</u> and <u>beliefs</u> can affect their classroom practice it was important to gain some depth insights on these two matters.

A : Teachers' knowledge on learning styles or dyslexia:

It was possible during the interviews of the teachers and the classroom observations of (G3), (G5) & (SC) to examine the different classroom practices according to the years of teaching experience and level of background on learning styles or in dyslexia.

Table 4

Teachers background	Teachers knowledge on learning styles or dyslexia	Years of teaching experiences
Grade 3 (G3)	Learnt about it at university in SEN course +have in-service training in dyslexia	11 years
Grade 5 (G5)	-	1& half year
Special class (SC)	SEN qualification so have to deal with LS has also qualification in behaviour difficulties	8 years

As it can be seen from **(Table 4)** (G3) teacher had more teaching experience with some knowledge about learning styles and dyslexia, whereas for (G5) the teacher had the least years of teaching experience and with limited knowledge in learning styles and dyslexia, and for the special teacher (SC) being a specialist had good experience with detailed knowledge in learning styles and it was prevailed in her practice and her answers during the interview procedure, for instance she was the only interviewed teacher agreeing that she identifies her students learning styles and accordingly she changes her teaching methods as she said:

"yes definitely I think about it and I have to divide my students according to this Learning Styles because I can't have two students with different learning styles, sometimes I group them a according to the same problem due to the large numbers of them it's possible to have such groups"

Moreover to provide better understanding of the whole school system and relating it to the field of knowledge about learning styles, the principle of the school commented that though their system is based on accommodating for the different needs of the students, she has limited background on the theories. Nevertheless, question 2 of the teachers questionnaire which was also concerned about teachers background on

learning style theories, only 4 teachers out of the 6 agreed that they have some background about some of the theories of learning styles, so it was expected for four teachers to give examples of some of the theories of learning styles that they knew, but the results were <u>only 3 teachers who gave examples of some of the theories that they believed it caters for the learning styles of their students</u>. These are some of the examples of the theories that the 3 teachers mentioned:

1)   VAK theory which she explained as a theory which is related to cognitive, language, logic and mathematic, the visual space, motor and interpersonal theory.

2)   "Montessori theory"

3)   "zonova learning theory"

On the other hand, during the analysis of question 2 as shown in **Diagram 6** it was apparent that all 4 teachers who knew about some theories of learning and who thought it is related to the theories of learning styles came to know about it through Reading journals, books and through internet, With the 3 females who learned about it at school from their peer teachers or special teacher and one of them during teacher training.

Diagram 6
= how did teachers know about the thories of learning styles

journal or books | internet | from their school (teachers/SEN teachers) | teacher tranining
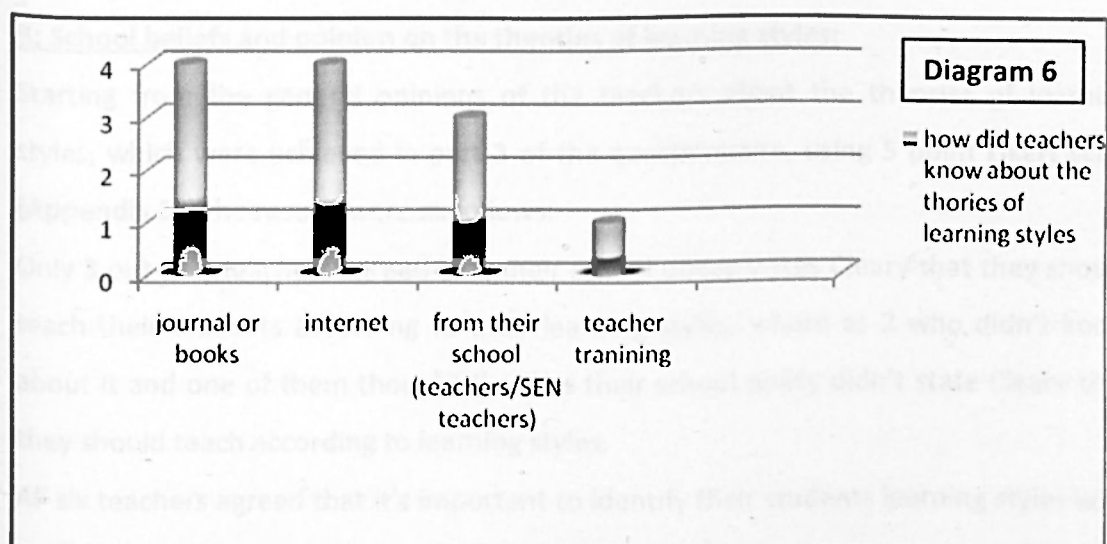
Hence, it is apparent that for teachers to gain new knowledge of learning styles really depended on their willingness to learn about this field more than on the training provided during university years or by the school. These same results were also

obtained from the interviews; here are some of the interviews views regarding Teachers' training about learning styles:

- All three teachers agreed that they only got their knowledge on how to cater for the different learning styles from teaching practice and training in how to deal with students with special needs generally, however <u>there was no specific in-service training provided to them regarding learning styles.</u>

- The principle commented that: *"teachers Might learn about learning styles through teams where teachers train other teachers".*

- The psychologist said: *" I provide whatever the headmaster advice of, so if the headmaster thinks that her teachers need training in a certain field she orders the workshop or discussion session from us" "I actually didn't have this idea that they will specifically need this workshop, but <u>I do know that some teachers need to go to training in various fields not only learning styles,</u> because the school have young teachers and new teachers so that not all of them had covered all the lessons and workshops that I have provided".*

B: School beliefs and opinion on the theories of learning styles:

Starting from the general opinions of the teachers about the theories of learning styles, which were achieved in part 3 of the questionnaire, using 5 point Likert scale (Appendix 1c) the results were as follows:

• Only 3 out of 6 teachers agreed that their school policy states Cleary that they should teach their students according to their learning styles, where as 2 who didn't know about it and one of them thought that the their school policy didn't state Cleary that they should teach according to learning styles.

• All six teachers agreed that it's important to identify their students learning styles with 5 of them agreeing and 1 strongly agreed.

• 4 teachers agreed that learning styles theories are useful in learning and the other two chose (I don't know).

• 4 out of the six teachers disagreed with the statement that says "learning styles theories are not practical to be used by teachers" and the other two commented as

didn't know about this statement wither its true or not. This meant that none of the teachers thought that teachers don't use learning styles because they are not practical.

- 4 teachers disagreed with the statement which suggests that 'there is no need to know about the theories of learning styles to be a good teacher', and one agreed with the statement and the last one didn't agree or disagree with statement. This meant that only one of the teachers who agreed that he doesn't need to know about the theories of learning styles to be a good teacher.

Nevertheless, on Part 7 of the questionnaires other teachers' opinions on the field of learning styles and matching teaching strategies with students learning styles were achieved for example:

- Teacher A stated: *"both influence each other and education"*
- Teacher B stated: *" I have no idea why we use the saying 'teaching through playing' when everybody is refereeing to theories, I was a graduate from the pedagogy faculty but I had to forget about all the 'nonsense' that they taught me in order to hold up with my pupils in my class"*
- Teacher C said: *"Mostly in the classroom there are students with different learning styles so work is individual, it's good to know the theories but only the practice shows what kind of teacher you are"*

Now, moving to more specific opinions about the theories of learning styles which emerged from the interviews, it was concluded by all the interviewed teachers and the principle of the school that it is important to identify their students learning styles and that this can be done through informal observation or investigating their students previous profiles. However, they also agreed that not all theories can be put into practice and that teaching experiences can teach the teacher more than the theories. As it has been mentioned before that the special teacher with the support of a psychologist from the PEDAGOGICKO-PSYCHOLOGICKÁ PORADNA (Educational Psychological counselling Centre) provides some guidelines on the students learning styles. Here are more characteristic responses given by the teachers and the principle of the school regarding learning styles:

- The principle: *"I think it's important to be aware that there are different learning styles like visual audible or kinaesthetic and tactile styles, but not necessary to know about the theories, and I think we are doing well because for example for learning English for students with dyslexia at our school we encourage them to speak more than writing and it depends on the needs of the students, by this way we do think of their needs".* She also added by saying *" I think it's important to know the steps and to use different methods but not necessary to know the theories because teachers get training and they are good at teaching, so it is not necessary to know about the theories of learning styles to be good teacher"*

- (G3) teacher stated: *"The practice confirm to me is that it's important to know about these theories because some students need to play, to see, to touch, or sometimes I have t repeat things from 1-5 times for those who have SEN in different ways. But when you take course on learning styles you see the general information on how to teach but only practice teaches you how to teach such students".* He adds and says: *"I know some of the theories but one theory can't show you everything in how to cater for all kids, children are very different in practice, so it does not work for all children."*

- (G5) teacher said: *"I think it's important and it pays back if you think beforehand, I don't want my class to be divided or to exclude my dyslexic students but I put more pressure on the dyslexia students to catch up with the other students and to make the gapes smaller".*

- (SC) teacher said: *"my theory is that ' you have to be born as teacher' because the relationship to students and ability to function with the students and to have 'creativity is a gift that can't be learned anywhere' and 'I know many young people who join school system who just don't have it', because they think they will stand in front of the crowd and then go, this is not what teaching is about.' I think that teaching is a mission rather than a profession' I also think all of these things will help because the person or the teacher sees the children in different activity".*

From the outset, It was clear from comparing the results of the questionnaire, classroom observations and the interviews that years of experiences, teachers believes or ways of thinking about the best way of teaching their students and meeting their students preferred learning styles as well as their knowledge about learning styles played a role in the discrepancy of the classroom practice. In addition, majority of the teachers though they had some background in the theories of learning , they didn't really know the actual or specific theories of learning styles as some of them believed that the over emphasis on theories of the different learning styles might lead to exclusion of their students with dyslexia, and that using these theories to understand the different learning styles can help to meet their students needs but it does not grantee that it will make them better teachers in their school practice.

4.3.4 What supports the Czech language teachers in responding to their students preferred learning styles?

This question was answered through the use of questionnaire and the interviews of the teachers. Firstly, from Part 5 of the questionnaire, teachers had to identify the factors that helped them to meet their students learning styles. Since none of the teachers choose strongly disagree for the sake of analysing their results in a simple way, it will be apparent from (**Diagram 7**) that 3 scales were used, as for those who agreed or strongly agreed were all coded as agreed, however detailed responses will be provided in the following analysis and the detailed table of results and diagrams are also available in (**Appendix 1c**). Hence, the main results were as follows:

Diagram 7: factors that could help teachers in the implementation of LS
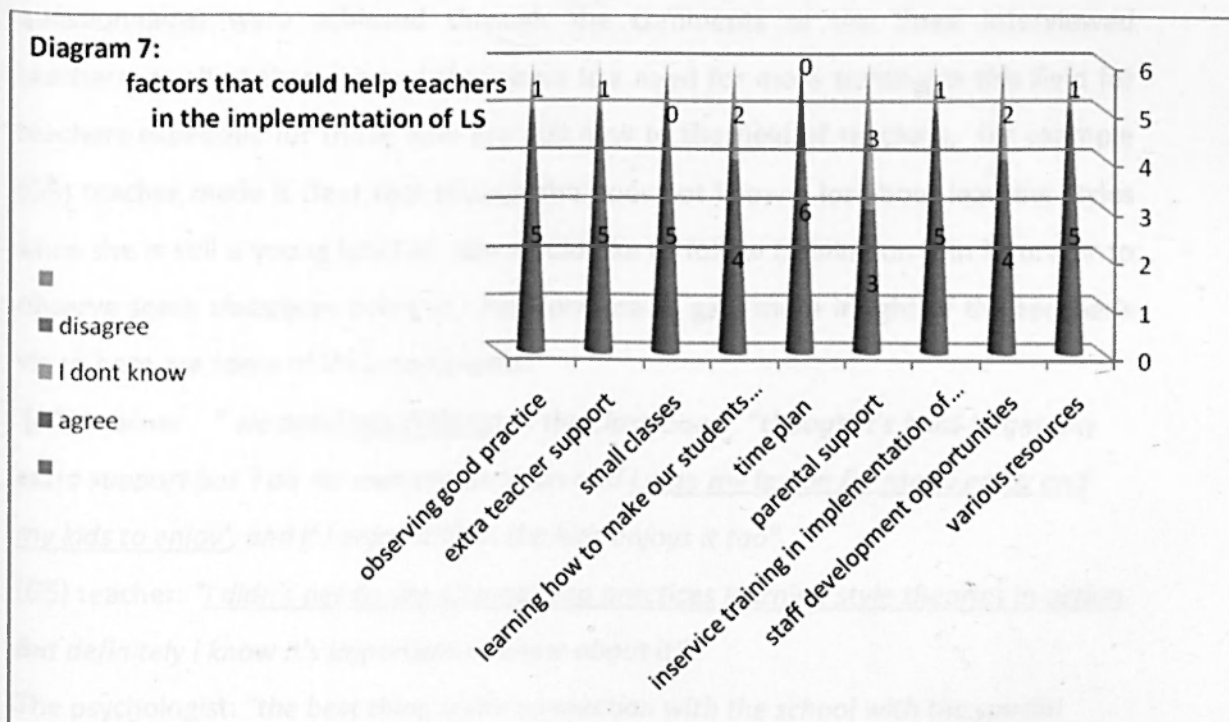
- Only 3 of the teachers thought that parental support might help to meet their students learning styles.
- 4 out of the 6 agreed that having staff development opportunities on learning styles theories might help it implementation.
- 4 out of the 6 agreed that learning how to make their students more aware about their own learning styles might also help in their implementation of learning styles in practice hence meeting their students' needs.

- 5 out 6 agreed that having available resources (funding, curriculum materials, supplies & equipment, etc.) and in service training in how to implement learning styles are important factors that helps to meet their students learning styles.

- 5 out of 6 also agreed that having less numbers of students in classes, or the availability of an extra teacher like support teacher, and observing good practice of implementing learning styles can help to reach better implementation of learning styles in schools.

- All 6 teachers thought that having time plan will help to meet their students learning styles.

Secondly, from the interviews almost the same results which were obtained from the questionnaires were achieved through the comments of the three interviewed teachers, as all of them agreed that there is a need for more training in this field for teachers especially for those who are still new to the field of teaching, for example (G5) teacher made it clear that though she does not know a lot about learning styles since she is still a young teacher, she would like to follow training on it in future or to observe some classroom practice . Furthermore to gain more insight of the teacher's views here are some of their comments:

- (G3) teacher : " we need _less children_ in the classroom", "though it's hard to get any extra support but 'I do my own preparation and _I plan my lesson for me to enjoy and my kids to enjoy'_, and if I enjoy it then the kids enjoys it too"

- (G5) teacher: "_I didn't get to see anyone who practices learning style theories in action_. But definitely I know it's important to know about it".

- The psychologist: "the best thing is the connection with the school with the special teacher plus the _parents_ should come to the centre where they will be explained to them well how, and what to do with the kid at home. Ideally it would be better to have _fewer children_ with SEN at the classrooms, so that the teacher can spend more time with the dyslectic child".

In brief, the main themes that emerged from the questionnaire and interviews regarding the support that might help teachers to meet their students learning styles were:

1- To have good plan

2- To have less numbers of students in the classrooms and providing appropriate support like assistances, as well as providing good recourses of materials and equipments.

3- Providing In service training about theories of learning styles and the possibility of observing practical good examples on how to meet the different learning styles of their students.

4- Encouraging parental involvement.

4.3.5 What are the barriers that faced Czech language teachers in applying Learning styles?

This question was also answered using questionnaires and interviews of the teachers. Hence Part 6 of the questionnaires was concerned with the factors that could make it difficult for teachers to implement various teaching strategies to meet the needs and the different learning styles of their students. To analyse the findings the same procedure for part 5 was used. And the results were as shown in **Diagram 8**:

Diagram 8: the challenges of implementation of learning styles
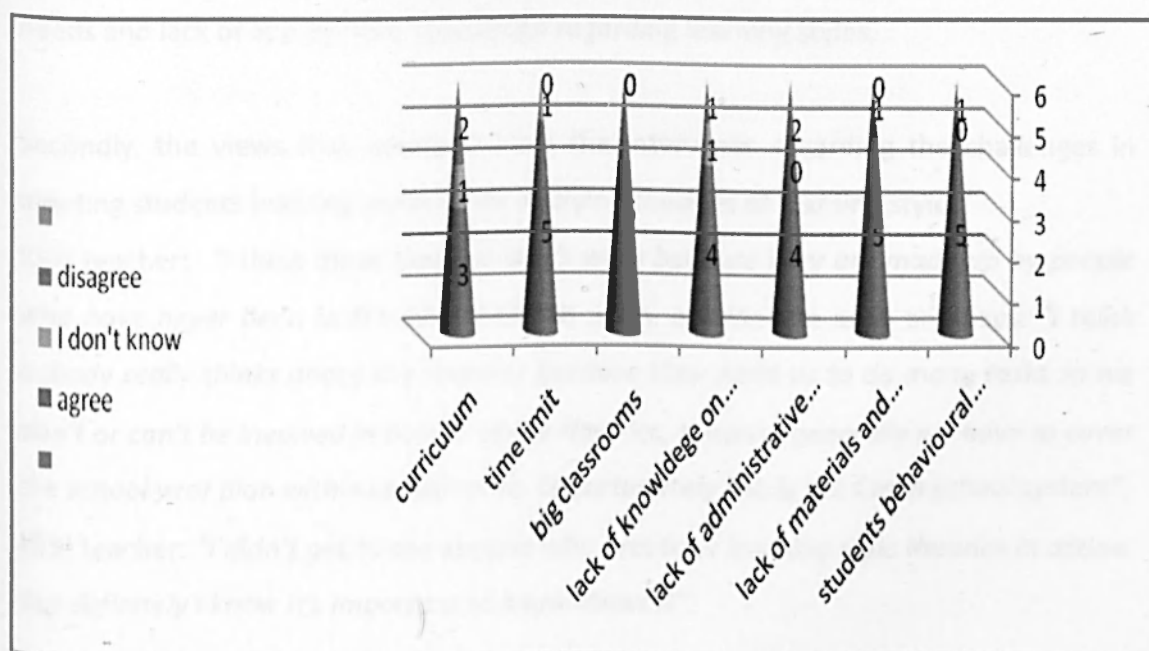
• All 6 teachers agreed that having large numbers of students or big classroom act as an obstacle to meet the needs of all students

- 5 out of the 6 agreed that having students with behavioural problems and the lack of material and resources can make it difficult to meet the different needs of all learners in their classrooms.

- 5 out of the 6 also agreed that time limitation might play a role in making it harder to meet the needs of all learners and one commenting as didn't know.

- 4 out of 6 agreed that Lack of administrative support on the field of learning styles can also play role in being an obstacle to meet the different needs of their students.

- 4 of them also agreed that the Lack of appropriate knowledge of the different Learning style can also be an obstacle with one disagreeing with the rest and one commenting as didn't know.

- Only 3 of the teachers thought that curriculum is another obstacle on the journey of meeting their students learning styles with 2 disagreeing with statement and one didn't agree or disagree.

So the challenges from the questionnaires were mainly related to class size, having different students with different needs like behaviour difficulties at the same circumstances were limited time is available for teachers to meet all the different needs and lack of appropriate knowledge regarding learning styles.

Secondly, the views that emerged from the interviews regarding the challenges in meeting students learning styles or on applying theories of learning styles:

- (G3) teacher: *"I think these theories don't work because they are made up by people who have never been in teaching and this is my opinion"* he adds and says: *"I think nobody really thinks about the theories because they want us to do many tasks so we don't or can't be involved in details of the theories, because generally we have to cover the school year plan within certain time. Unfortunately this is the Czech school system"*.

- (G5) teacher: *"I didn't get to see anyone who practices learning style theories in action. But definitely I know it's important to know about it"*.

- (SC) teacher: *"we did have workshops but within these we didn't have any about (LS) theories, but may be in the future years"*.

Therefore, by comparing the results of the interviews and the questionnaire it was possible to observe some similarities, hence the main challenges that face teachers in identifying or even working according to the theories of learning styles were as follows:

1- The fact that many of these different theories came from researchers who actually didn't practice it or never been in teaching.

2- The amount of activities needed from teachers to be achieved in a limited time.

3- Large numbers of the students with different needs in the same classroom.

4- Lack of appropriate knowledge about the different Learning styles.

5- Limited opportunities in observing good classroom practice in this field, or at least having appropriate training on it.

4.3.6 How Czech language teachers involved students with dyslexia to know and use their preferred leaning styles?

For this question it was clear generally from the answers for part 3 of the quaternaries which have been explained earlier that only four of them who identified their students learning styles, but this did not necessary mean that they did empower their students to know and use their preferred learning styles. In confirmation, all interviewed teachers agreed that it's hard to empower their students to use their students learning styles especially at primary level; therefore they didn't attempt to ask their students about what kind of learning styles or activities they prefer.

Some characteristic responses given by the principle and some teachers regarding involvement of their students to know their learning styles:

- The principle: *"no not really it's not up to the kids"* she also added *" I think it's important to know the steps and to use different methods but not necessary to involve students in learning styles "*

- (G3) teacher: *"I don't use formal questionnaires because I think they are too small to answer , the kid has SEN I will have to read it for him and even repeat to make them understand my questions, because there is always a degree of not understanding what I want from them"*. He also added saying *"it's not my point to take all the obstacles*

(and like put the students in glass house) then they won't be able to exist in the real life they have to go through everything".

- (G5) teacher: *" No I don't ask them much"*
- (SC) teacher: *" Actually I have never asked them if they like it or not (because you can just see what they like and figure it out)"*
- The psychologist: *" No, students in grade 5 they don't learn it so much yet, but at this stage we do try to find their learning style where their disability does not interfere so much with the learning styles"* she also said *" for older students for example for those who are 13+ years including high school students, we focus in how to learn and how to bring the information into them, they learn how to be successful students and this point the special learning style now is preferred, so then they probably decided which learning style is the best for them to keep and retain the information".*

Therefore, I can argue that generally teachers didn't ask their students about their learning styles preferences and didn't empower them to use it by themselves until they reached higher grades,   mainly because of their believe that they are too small to be asked and if they have special needs might not be able to understand and answer the questions properly. Meaning that, it was enough for teachers to provide their students with certain choices and different methods of learning but not necessary to involve them in knowing their learning styles, as (G3) teacher suggested that: *"students have the option and choose what they want to experience act, draw, writing, so they have options of ways of expression. But I don't ask them about their feelings, as too many of them have SEN".* Therefore, for many of them followed the advice of the psychologist of the special centre who believes that:

"The point with the younger kids that we don't want to compensate all the senses just by replacing using the one which is most convenient for the kid, the point is that we need to re-educate all the senses and you know bring them in to function in the best possible way".

4.3.7 Would the school provide any future training in learning styles?

Through the interview of the principle she commented that she might think in future regarding the training in this field as she said: *"we might also ask for outside training or in-service training regarding this matter"*. Whereas the special teacher of the school stated that : *" Definitely it already exist right now, when I talk to teachers and assistance when I tell them which way or style is best for them but I can't teach it to the teachers. My task is to teach the children but definitely I try hard to have good cooperation with the teachers and I ask them about how the students doing in their lessons and what else we can do for them and their parents, but I just think that the school system here is totally different and good teachers know this, as we have extra quality"*. Finally, the psychologist from the special centre when asked about wither in future she would think of providing training for teachers of this school in the field of learning styles? Her answer was *"yes but the initiative has to come from the headmaster, We don't only come to organize sessions at schools, but as well we organize some courses in our psychological centre, but the lecture on learning styles is automatically integrated in the schedule of our workshops normally"*.

4.4 Summary

Most of the information in this research was generated from questionnaire and interviews however, by conducting classroom observations and document analysis and interviewing different participants such as the language teachers who were also class teachers, a special teacher, psychologist and the principle of the school provided good source of data triangulation. For example, complete reliable answers of the research questions couldn't be achieved without the combination of the various methods of data collection and the obstacles that emerged through the analysis of questionnaires Was only overcome by the confirmation of results through the use of interviews and classroom observation. Similarly, though many language teachers didn't have clear understanding of the meaning of learning styles by observing the report provided by the psychologist from the special centre it could be seen that the auditory,

kinaesthetic, visual, or tactile and any other multisensory aspect of learning were covered by the report and that teachers were required by the school to meet the different needs of their students without take in it into extremes of using specific theories.

In nutshell, it can be stated that the research generated a fairly rich and meaningful data on teachers' opinion on the challenges that face them in practicing learning styles on the journey of meeting the needs of their students with dyslexia which is hoped to have some future practice implication. Findings also provided some basic ideas about the reality of learning styles in practice, where despite teachers' suggestions of their need for more support and training on handling the different learning styles, majority of them felt confident in dealing with the needs of their students, with many of them believing that the success of implementation of learning styles does not necessary depend on knowing or practicing all the different theories of learning styles, however it depends on: Teachers motivation, experiences in dealing with students' different needs and the level and quality of support and training provided for teachers.

Chapter five: Discussion of findings

Introduction

This chapter contains the discussion and interpretation of the results of my research in the context of my literature review. It will consist of the answers to my research questions; hence, you will be able to observe the relation between my findings from chapter 4 to the literature review in chapter 2 as I will set my findings in the context of what I already knew before the start of my research.

5.1 General discussion

This study investigated beliefs and practices on the implementation of learning styles to help students with dyslexia in their learning, it was apparent from the different methods of data collection from chapter 4 that teachers' beliefs and attitudes lead the way they practiced learning styles in their classroom. In other words teachers' attitudes were the strongest influence on teachers' intention to implement different strategies to meet their students' different learning styles and needs. The study of (Ballone, 2001) on teachers beliefs about learning styles in science classes also came to the same conclusion, and he suggested that since the inclusion and the implementation of the different ways of meeting the needs of different learning styles depends primarily in the role of teachers' beliefs, hence teachers' beliefs should be taken into account. The prevailed attitudes of teachers of this study was that they valued their experience and thought that in many cases it was better than knowing about the theories of learning as some commented that to be a teacher is to be born as a teacher similar findings were achieved by Snider and Roehl (2007, p873) as they found out that teachers valued experience even over education and training for professional development and *"viewed teaching as more of an art than a science"*.

Generally, the results of this current study proved the necessity of fostering positive attitudes towards the implantation of learning styles through more training in the field of learning styles, and this was clear on teachers' comments on their need of being involved in positive experiences that shows that they can implement these strategies in their classrooms. These findings also supports the results of the study of (Ballone, 2001) suggesting that by providing successful opportunities for teachers through pre-

service training or through ongoing staff development their attitudes might be changed from negative to more positive one regarding learning styles, as he advises that in teacher training *"teachers should be encouraged to have enough opportunities to visit classrooms that use multiple ways of strategies which also focuses in the learning styles of the students"* (Ballone, 2001, p22). Nevertheless, depending on the school systems and their training policies teachers also can be provided with opportunities of practicing these strategies with their colleagues in order to receive critical feedback.

5.2 ways used by teachers to identify their students preferred learning styles

Language teachers of the researched school didn't have to identify their students learning styles because everything is provided for them from the IEP report from the special centre hence none of the teachers really felt the necessity of identifying formally their students styles, hence all of them preferred informal observation of their classroom as a mean of the best way to identify their students needs rather than their different learning styles. This in lines with (Smith and Dalton, 2005b & Mortimore, 2005) findings who all agree that it's ok for teachers to use any form of assessment to identify their students learning styles from informal strategies like observation to more formal ways like using questionnaire and check list for their students. Though according to (Reid, 2005 & Revell, 2005) most schools prefer to use the VAK theory because of its simplicity, which is related to the visual, audible and kinaesthetic or tactile skills and was introduced by Dunn & Dunn in 1979, at this school only three teachers one being the special teacher who actually said they knew about it and two of them provided theories that they thought it is beneficial in meeting their students' needs. (Reid, 2005, Loo, 2004, cooper, 2004 & Fielding, 1994, Yerxa, 2003) also agreed that in identifying students learning styles many teachers don't follow certain theory; however just to acknowledge its' existence is a way of acknowledging the existence of differences.

On the other hand, though the school identified their students learning styles through the use of the special centre report, students were not labelled with specific styles, as some teachers commented that they didn't like to take it into extremes of excluding

their students. Hence, these findings disproves (Franklin's, 2006) assumptions that by indentifying learning styles students get labelled, rather it approves (Revell, 2005 & Reid, 2005) suggestions that the miss interpretation of how to put LS in practice comes when teachers believe that each student have only one learning style and that for those who perceive it as only a guidelines to reach the diversity have better chance in practicing it right and less chances of labelling their students to certain style. Hence, the positive outcome which was observed from this school was that teachers showed good attitude in acknowledging the benefits of knowing their students different learning styles. This was through their implementation of the various resources to cater for their students' needs without labelling, after all *"Learning styles: is about enabling not labelling"* (Fielding, 1994, p403). Another good example, is the view of the school psychologist who argued that in their practice with teachers from this school, it's not important for them to limit their students to one LS and this was considered by (Loo, 2004; the DEMOS team, 2005; Revell, 2005; Reid, 2005) as the fine line between teachers who can be called as bad or good educationalists in dealing with learning styles in practice, as by having this kind of attitude and thought, it will strength the other styles of the students instead in limiting their ability to one style.

Finally, though many of the teachers during the procedure of questionnaires and interviews believed on some of the advantages of knowing their students learning styles as they believed that using variety of activities to meet their students learning styles could have some benefits such as it showed them their needs and it can make learning good experiences for all learners, which agrees with (Cooper, 2004; Slack and Norwich, 2007; Tilstone, et.al, 1998) who pointed out the importance and benefits of identifying learning styles especially for those who have specific learning difficulties like dyslexia. However, the majority also thought that by identifying the learning styles formally will mean more teacher effort and time spent in preparing the different materials, to meet the different needs.

5.3 Teaching practices and the extent that teachers took into account the preferred learning styles of their students with dyslexia

Though it was mentioned before that all teachers acknowledged the importance of using different strategies to meet the different learning styles of their students, yet some contradicting results were achieved when questionnaires and interview results were compared to observation remarks, hence it proves what (Robson, 2002 & Coffield et.al 2004) would like to call as *"the real world"*, meaning that the best way to understand reality is through observing the real practice. (slack and Norwich, 2007) also declared that acknowledging the Importance of identifying learning styles might not necessary mean that teachers will meet the needs of all students but, it means that the teacher is aware of the needs and abilities of the child and will try depending on his/ her knowledge to solve the challenges. Therefore, In the light of this study it could be explained that though all the language teachers of this school had good intentions of providing appropriate support for their students and this was apparent in their responses and various classroom practices who believed in multisensory strategies, yet their level of knowledge about how to cater for the different learning styles and their beliefs regarding this matter influenced their classroom practices and it's a fact that might have not been known to the school or the teachers themselves.

In explanation, generally students in all observed classrooms were seated in rows, but some class teachers tried to involve group work and in certain classes special groups of students with dyslexia were supported by their assistances. According to Reid (2005) & Armstrong (2000) for students to be seated in rows facing the front of the room, and the role of teacher only sitting or standing on the front of the classroom is not the best classroom arrangement that teacher can do for teaching students. Hence, teachers should be encouraged to arrange their classes in a way which encourages all different learners to be involved in activities by setting "stations" where small group can be activated for those who prefer peer support or group work. The results of the questionnaires also showed that none of the language teachers recommended

learning styles or encouraging group work to be in the lead though they thought it is important but they didn't considered it in the same level as thinking about their students' abilities and disabilities.

Saying so, it will only be fare to state that the practices and the involvement of the students with dyslexia in group work deepened mainly on teachers' willingness and beliefs on the importance of enforcing such activities hence different level of group involvement was observed in the different classes. For instance, some classes showed good students teacher relation and better group and individual activities, which catered for the different needs of the students, while other teachers used simple strategies focusing on what they perceived as being effective teaching leaving some students feeling excluded at certain times of the lesson, especially when group work for students with dyslexia meant to work with assistances and only with those who have same difficulties like themselves.

More specifically, from the classroom observations it was clear that for those who believed on catering for their students different needs and had some knowledge on how to cater for it, used Varity of materials and activities involving kinaesthetic, visual & audible senses and some encouraged students to think & ask questions, others used competitions and problem solving activities making their lessons enjoyable for all their students. Whereas those who believed on the ordinary way of teaching and that having equipments like whiteboard interactive boards might mean less classroom management, used less activities enhancing students creativity and abilities , which in return excluded some students at certain times of the lesson. Hence, it could be said that it won't be fare to generalise the practices that have been observed from the different teachers even only at the level of this school, yet for sure I can conclude that the discrepancy of teaching practices at this school depended on three main factors; it depended on teachers' beliefs regarding the best way of meeting their students' needs, their knowledge about how to cater for the different learning styles, as well as their years of teaching experiences, and this was also proved by the study of (Ballone, 2001). Not to forget that though some of the teachers had some background in the theories of learning, yet they didn't really know the actual or specific theories of

learning styles as some of them believed that using these theories to understand the different learning styles can help to meet their students needs but it does not grantee that it will make them better teachers in their school practice. These findings agreed with some of the criticism of (Coffield et.al 2004) regarding the use of the theories of learning styles and the cautious that teachers should take into consideration when it comes to school practice. Yet, one shouldn't overlook the fact that to read about the recent research done by teachers or practitioners in the field of learning styles as mentioned in the literature review for example the studies of (Reid, 2005; Exley, 2003; & George, 2005) can actually benefit teachers to gain some ideas about learning styles in school practice.

5.4 Teachers views on the support factors in responding to their students preferred learning styles

From teachers responses during the interviews and the questionnaires the following supporting factors were achieved:

5- To have good plan

6- To have less numbers of students in the classrooms and providing appropriate support like assistances, as well as providing good recourses of materials and equipments.

7- Providing In service training about theories of learning styles and the possibility of observing practical good examples on how to meet the different learning styles of their students.

8- Encouraging parental involvement.

Reflecting on this factors and relating it to the observed classroom practices and the interview responses, it was clear that for those who considered planning their lessons as important factor had better way of achieving their students needs within the time limit of their lessons, it was also clear that the discrepancy of the available material in the different classrooms proved that the more appropriate materials available to teachers the better chance to meet the needs of the different students. Dunn & Dunn (1979) cited in (Ballone, 2001, p23) suggested that instructional materials can help to meet the needs of different learning styles and can include " *1) hands-on materials, 2)*

textbooks, 3) videos, 4) audio recordings, 5) visual aids, 6)cooperative group activities, 7) computer-technology related activities, 8) outdoor-related activities, 9) kinaesthetic activities, and 10) creative art activities"

Nevertheless, despite the fact that majority of the teachers thought that having appropriate materials in their classroom is a good support for them as for example, one of the teachers considered using computer as a helping aid in working and meeting the needs of more than one child at the same time, and another teacher used quick picture clip in an interactive white board to prove what he said to students and to accommodate for more than one student at the same time. Yet, one of the surprising views is the view of one of the teachers believing that having an interactive board in her classroom is not beneficial because of having large numbers of students with special needs who some have behavioural difficulties. Though researches such as the one done by (Hennessy et.al, 2007) proved that using interactive white board is very beneficial as it's considered as *"Whole-class interactive teaching which overcomes the managerial difficulties of teachers supervising multiple pupils in hands-on mode and making timely interventions"*(Hennessy et.al, 2007, p284). They also suggested that research indicates that teachers' choice of technology is often related to their own conceptions of teaching and learning, and introducing new tools does not typically drive radical pedagogical change. Moreover , the study of (Boyle & Lee, 2004) on teachers' attitude regarding the use of the interactive white board , teachers considered it as beneficial because it provided immediate feedback on student achievement and it allowed teachers to be more creative. Hence, having such unexpected result on this study proves the suggestion of the special center psychologist who was involved in this study to be a right suggestion, meaning that it will be more realistic to say that for new teachers they might not only need training in the field of learning styles rather some other training such as how technology or special materials can help in meeting the different needs of their students might also be needed. In addition, teachers should be encouraged to research and read about researches done on the field of learning styles and how to apply effective technology and practices with students who have special needs. Some other beneficial studies

that show how one can use videos or technology to support students learning styles regardless of their needs are the one done by (Geisert et. al, 1990; Fielding, 1994; Hudson et. al, 2007; Briesch et. al, 2008) which though has not been mentioned by this study in detailed but are worth reading by teachers, as they also provide some good practical examples in how learning styles can be applied in the classroom context, with Fielding (1994) also providing clear ways of how schools can train teachers to use learning styles effectively.

5.5 Teachers views on the challenges that face them in applying Learning styles

The most critical view that emerged from teachers responses regarding the barriers that face them in applying the theories of learning styles was some of them believing that these theories don't work because its coming from researchers who never practiced it or never been in schools. (Ballone, 2001, p23) agrees with this and declared that teachers in schools suffer when they feel that they are excluded from decisions and treated like instructional robots and that active participation and decision making may empower and excite teachers , which in return will encourage positive attitudes towards the application of learning styles in schools. Hence, this believe that came from the teachers of this study, also proves the necessity of encouraging more teachers to research this field of learning, to prove how good practice can be reached through learning styles. At the same time this finding proves the significance of my study and it proves my first assumptions which I mentioned in the first two chapters of this study that the limited research on this field by teachers themselves, might make some believe that real teachers don't really practice LS, which is not true as it has been mentioned on chapter 2 of this study that there are some of the rare studies on learning styles carried by teachers or school practitioners such as the studies of (Exley, 2003; George, 2005; Bragg , 2007 ; & O'Brien, 2009) and that the limited research coming from teachers themselves should not be used as an excuse of not practising or at least gaining knowledge about how it helps to meet the needs of different learners rather it should act as catalyst for more teachers to try to research and prove or disprove these theories in their school practice.

Moreover , teachers in this study also remarked that the limited opportunities in observing good classroom practice in this field, and the limited training opportunities in acquiring how to meet the different Learning styles has also played as barriers in meeting the needs of their students. It was clear from the questionnaires and interview responses that for them to gain knowledge of learning styles depended on their willingness to learn about this field more than on the training provided for them by the school, which is a crucial issue that will be discussed later on this chapter.

Nevertheless, teachers also considered the large numbers of students in their classes and the work load needed from them in a limited time as other barriers in the way of meeting their students learning styles, and others were concerned with their classroom management as some felt that behavioural problems could impede the inclusion of a variety of strategies and activities. (Ballone, 2001, p24) stated *"The difficulty in handling a classroom with many different learning styles poses a challenge to many Educators. However, many students express behaviour problems due to boredom or frustrations that may stem from the type of instruction that is typically given"*. Therefore, it could be said that using different activities might overcome the behaviour problems of the students. In explanation, one of the observed teachers said in his interview *"There is nobody who can make it easy for me; it is like getting thrown with pieces of wood under your feet. It is hard but I do my own preparation and I plan my lesson for me to enjoy and my kids to enjoy, and if I enjoy it then the kids enjoys it too"*, so following his attitude and belief on enjoying his lesson though he didn't have any extra support of special assistance in his class, he had good classroom management and all children even those who were identified as having dyslexia with behavioural difficulties were involved throughout the lesson. Hence, it could be concluded that the barriers and teachers concerns should be taken into consideration, as for teachers to reach their aims should feel appreciated and obstacles should be broken down to ease their way. At the same time teachers should be encouraged not to focus only on the barriers rather, to enlighten them with the good creative examples that do exist at their school regardless of the barriers and this can be done through regular encouragement during in-service training and by sharing the good

practice and to advice each other about recent good practices and research done by teachers regarding the field of learning styles.

5.6 Teachers views in involving their students with dyslexia to know and use their preferred leaning styles

Many researchers like (Franklin, 2006; Reid, 2005; Revell, 2005; Cassidy, 2004 & Exley, 2003) and even those who are against the theories of learning styles like (Coffield et.al, 2004) all agree that the best way of accommodating for students learning styles is to make them aware of their own learning styles. Yet, the findings of this study found that some teachers believed in providing their students with certain choices and different methods of learning but all of them didn't ask their students about their learning styles preferences and didn't agree with empowering their students to know their own learning styles not until they reached higher grades and this was according to the views of the teachers, the principle and the psychologist, mainly because of their believe and fear that they are too small to be asked and if they have special needs might not be able to understand and answer the questions properly. (Bragg, 2007, p512) came to the same conclusion as he also found that teachers might resist taking the voice of their students regarding their learning as a result of their fear of their students *"making unrealistic requests or judgments, without thinking through their consequences or meaning"*. Davidson & Savenye (1992) cited in Fenrich (2006, p236) also agreed with this fact by noting that *"students might not necessarily make the best choices with respect to their learning style, as they might choose to do what they think is easy or activities with which they are already familiar"*. Yet, (Fenrich, 2006) also argued that this should not be an excuse for teachers therefore, *"teachers should allow for flexibility, for example by letting students learn where they prefer (in a hard chair, on a lounge, on the floor, in a noisy area, in a quiet area, where it is bright, where the light is low, in warm areas, in cool areas or a laptop can provide for this flexibility"* (Fenrich, 2006, p238).

On the other hand, Smith & Dalton (2005) remarked that students can actually understand their learning styles if provided with the chance to show their likes and dislikes and by comparing their experiences to evaluate the bad ones and the good

ones. And the study of (George, 2005) & (Exley, 2003) provided in the literature review are life examples that students even those who have learning difficulties and even if they are at young age of 7 or 8 years can be asked about their preferences in very simplified manner without the need to use specific theories which are in many cases and in the view of the teachers of this study might need long time and teacher effort.

Another good example of the possibility of asking young students about their preferred ways of learning is the study carried by Bragg (2007) which was also mentioned in the literature review, were the box of suggestion made up by the primary students built a trust between staff and students, as staff had to act upon student's suggestions in order for the students to believe that their concerns were taken seriously and acted on. Moreover, Martin (2005) cited in (Bragg 2007, p506) pointed out that *"adult belief in student voice is essential to realise its potential"*, and according to Bragg's study the role of the principle was essential in empowering the students, as at the beginning when the principle of the school asked teachers for their support regarding the project of listening to students, teacher's responses were no different from the responses of the teachers of this study as one teacher said, *"I listen to children all the time anyway!"*. However, at Bragg's study the positive attitude of the principle on determining to go along with empowering their students' voice encouraged many teachers to agree with the procedure and to acknowledge the aims of the principle. Therefore, I can argue that the attitude of those who are in charge of the whole school system can effect and change the attitudes of teachers in more positive way, as (Corson, 1992) cited in (Bragg, 2007, p509) remarked that *"For (new) values to count they need to be ... articulated sincerely by significant figures in the organization so that they become part of the taken-for-grantedness of the place"*. This is not to say that the journey of empowering students to know and use their own learning styles is an easy one as (Bragg, 2007, p512) also made it clear that for the positive achievement of the study there was a need for students to be taught in systematic way the broader context of their activities, and issues of values and ethics were addressed early and throughout the process, and the whole and final aims were made clear to all teachers, not to forget involving teachers in the whole procedure of

deciding any important decisions as being one of the major factors of achieving successful outcomes. However, the successful outcomes will never come to effect without the appropriate positive attitudes.

From the outset, if teachers have more positive attitudes about the ability of their students with SEN or dyslexia in being able to talk for themselves to share their needs, there will be better chance for teachers to practice the power of their students' voice as advices by Lewis & Porter (2004), and for this school to achieve practical examples in a world were a lot of researchers have different views about the application of LS it will be beneficial to follow the advice of (Snider & Roehl, 2007) which suggests that if schools are willing to put learning styles into practice principles should empower their teachers to carry research in their school as this is one way in changing their views to more positive and acceptable to them and to their school circumstances.

5.7 Summary

In conclusion, it can be stated that most of the results achieved by this research following the views of the 6 language teachers, and the views of the special teacher, the principle of the school and the psychologist of the special centre, were in line with the findings of the past research. Still some unexpected findings were also achieved especially regarding the importance of empowering students to know and use their learning styles which were in contrary to the calls of the recent researchers in the power of introducing students to know and use their learning styles. Yet, the findings of this study has proved that teachers' beliefs are critical components of school practices and that changes in belief structures may result by fostering positive examples of practices and attitudes as well as providing appropriate staff development opportunities and that change does need sometimes to come from those who are in charge of the whole school system.

Moreover, though there was some evidence that the school is willing to provide some training for their teachers regarding the field of learning styles, but at the mean time many language teachers were practising learning styles according to their experiences, their knowledge on learning styles and their own personal motivation. Hence it's believed that appropriate training in this field will be beneficial to all teachers. In addition, since there are little evidence on how teachers put LS into practice this study can be consider as good example on teachers' beliefs in practising learning styles with their students, and its hoped that the school will take the results of this study in a critical way, a way which is hoped will encourage to research this field in their school and to investigate and examine what can be done regarding meeting the needs of the different students. Finally, It is also hoped that the results of this study were made clear to show that though some of the motivated teachers didn't follow one specific theory, yet they were creative in their way of teaching, as they showed good evidence and practice in meeting students learning styles just by following their beliefs and knowledge about meeting their students different needs.

Chapter six: Conclusion

Introduction

This chapter is an evaluation of the methods and research findings of my study; hence it will provide an overview of what has been achieved alongside what couldn't be achieved. It will discuss the implications of my findings to my professional practice in the field of dyslexia and at the end it will pinpoint the limitations of the research and it will outline the recommendations for future research that might add to the body of knowledge of learning styles.

6.1 Evaluation of methods

This small-scale research used different methods of data collection quantitative and qualitative methods to gain an insight into the practice of learning styles in meeting the needs of students with dyslexia in primary mainstream school in Prague, and to gain better understanding on teachers' views about learning styles. Hence, the answer of the main question of the research *"How Czech language teachers in primary mainstream schools in Prague use learning styles to support students with dyslexia?"* was achieved through gathering the views of 6 language teachers who also were class teachers, the opinions of a special teacher, and the principle of the school as well as the views of the psychologist of the special center. The sub questions of this research were addressing the school practice on learning styles that was held by language teachers and their attitudes regarding the use and identification of their students learning styles as well as the barriers and support factors that came along their way of identifying and dealing with learning styles. In addition, an outline of the schools' views was also achieved regarding empowering their students to know and use their own learning styles.

Nevertheless, the use of qualitative case study that was exploratory and interpretive in nature was appropriate, as it enabled multiple meanings and viewpoints to be gained through questionnaires, semi-structured interviews as well as observation of the classroom practice and data analysis of the psychological report was also used as a form of triangulation. Therefore, the views of the school provided a good background and better understanding about the practice of learning styles and its' identification as

a whole school system and the different views from the different participants helped strengthen the results. As such the main objectives of this study were achieved and at the end it was possible:

9) To develop a deeper understanding about the awareness, beliefs and perceptions teachers have regarding the theories of learning styles and its implication in schools

10) To identify the extent in which teachers take account of the students preferred Learning styles, and what encourages them to use some of the theories of learning styles with students who have dyslexia.

11) To identify the range of practices already taking place in school context, in catering for the needs of students with dyslexia.

12) To find out the barriers that faces teachers on using the theories of learning styles when dealing with students with dyslexia.

6.2 Evaluation of findings

Teachers' perception of learning styles in practice, was more about gaining the knowledge of the theories to support their experience more than knowing the knowledge to put it into practice, in other words teachers of this study acknowledge that different students have different needs and learning styles and according to their school system they didn't have to identify these learning styles but they had to acknowledge its existence. They also believed that their motivation, love of teaching, and experiences have served better than knowing these different theories in meeting the needs of their students. Yet, many of them didn't ignore the fact that they would like to know more about these theories and perhaps to observe some real teacher practice on it, better than just reading about it in researchers which are in their view have been carried by people who were not teachers from the first place. Hence, it raises issues of teachers feeling like robots in just applying these theories.

Therefore these beliefs lead the way teachers met their students learning styles, hence different practices emerged from different teachers of the school according to what the individual teachers believed as being effective teaching, with many using multisensory approaches for the primary level leading them to use variety of materials and some believing in more simple strategies and more ordinal work for some

students with dyslexia as they believed that such students should not be excluded from their peers. At the same time, it was apparent from the results that the school based their work on the recommendation of the psychologist of the special psychological center, who also believed in multisensory approach but acknowledge the fact that more training is needed for teachers not only in the field of learning styles but also in other fields of effective teaching.

Moreover, teachers of this current study didn't follow certain theories of learning styles and they didn't label their students with specific styles, which is in a way is a positive outcome as proved by Fielding (1994) & Reid (2005). However, it also meant that majority of the language teachers used their experience and their knowledge to meet the needs of their students, which is in some cases was not enough to meet the needs of all learners as it has been observed in the case of some classroom practice.

Nevertheless, the school feared the role of empowering their students to know or use their own learning styles, this outcome was quite surprising as everyone at the school didn't even acknowledge the importance of this factor which is considered by many researchers even those who disagree with the theories of learning styles that it's the only way which might enable the effectiveness of the implementation of the various theories of learning styles. Therefore, though the school had a lot of programmes for their students who have different level of achievement, yet at primary level it was all up to the school to decide, as they believed that their students are too small to be asked and in the case of those who have special needs there is a great chance of them not to understand the aim of the questions, and some teachers believed that they can tell what their students like through their daily practice. Yet, it is possible to argue that if teachers are encouraged to have more positive attitudes about the ability of their students with Special needs or dyslexia in being able to talk and share their needs with their teachers, there will be better chance for teachers to empower the voice of their students. As (Fielding, 1994) also suggests that it's more helpful for students to know their own learning styles and help them to develop the other styles too whenever it's possible.

At the end, linking all the previous findings together one can say that all the teachers of this school had good intentions of providing appropriate support for their students and all tried to act and teach according to their knowledge , years of experience and beliefs in what is best for their classroom practice and circumstances. However, the discrepancy of their level of knowledge about how to cater for the different learning styles and their different beliefs regarding this matter influenced and raised discrepancy in their classroom practices and it's a fact that might have not been known to the school or the teachers themselves. Hence, if schools do see the potential of putting learning styles into practice perhaps principles should empower their teachers to carry research in their school as this is one way in changing their views to more positive and acceptable to them and to their school circumstances.

To conclude the findings, the barriers and concerns that mentioned by the language teachers of this study should be taken into consideration, and teachers should made to feel appreciated , through concentrating not only on the draw backs rather on the real practices that also emerged from some of the practice of the teachers of this current study and this can be done through sharing the good creative examples of knowledge and experiences of those teachers of this school with the ones who have less experience or knowledge during in-service training and by sharing recent good practices and research done by teachers regarding the field of learning styles during their team work. In addition, principles can have strong role in empowering these changes especially when it comes to change the level of their students' voice and using their own learning styles and this can be done by the cooperation between the principle, teachers and the students themselves.

6.3 Implications for practice

The aims of this study started by my personal objectives and I'm happy to acknowledge that at the end of this research regardless of the limitation that I will discuss later and the obstacles that emerged through the journey of my research, I did achieve my personal aims which were, to have better understanding about the field of learning styles through reading the different critical views and to compare it to what practice

has to provide for me about this field. At the same time since limited researches has been done about what teachers think about the implantation of learning styles in practice generally as well as in my own country Oman , I can say that this study has contributed greatly to my knowledge and to a certain extent to the current body of research on learning styles. Moreover, the barriers that language teachers talked about in this study also added a new dimension in that if teachers had the choice might not really want to practice these learning styles unless all the barriers had been addressed. Nevertheless , the knowledge that I have gained from the Czech teachers were very valuable and essential, and it has certainly provided me with various insights on practicing learning styles, which for sure I will share it with the teachers in Oman, especially the views and the observation practices, which also encourage me to read on wider researches about the materials and the role of technology such as the interactive whiteboards in supporting students with dyslexia, hence it enriched me with better understanding about how to meet the different needs of different students .

In addition , by doing this research I had an opportunity to develop my awareness about the meaning of systematic research, as I learned the ups and downs of my methods and analyzing strategies, which made me question, explore and reflect on my work, my responses and on my way of thinking . Hence, I have developed better research skills, which encourages me to think about carrying this similar study in Oman to know about teachers attitudes, especially that the application of such theories in my country most of the time is being done without addressing all the barriers before the start of applying any theory of learning. In addition, it will be interesting to carry a research on students' voice about their own learning and to think about ways of empowering their voice especially for the upper grades of primary level.

Moreover, though I do acknowledge the fact that what I have achieved here might not necessary mean that I will get the same findings in my country , but at least following my role as a supervisor for teachers who support students with special needs , I have gained some basic ideas about the common challenges teachers face while handling the different learning styles; their perceived training needs; the intervention strategies they use, and most importunately how do they feel when someone from outside the

school system comes and impose some ideas on certain theories on them without studying the actual situation first and also without mentioning the limitations of some of these theories as Coffield (1994) suggested that practitioners should make it clear why they choose certain theory and the limitation of these theories should also be discuss with teachers so that a clear picture can be achieved.

I also believe that this study has provided some practical examples and studies for those teachers who had some negative attitudes towards the ways of supporting students with dyslexia or with different needs. These studies will also encourage limiting teachers fears about empowering their students and the use of the different materials and technology aids to support their students. Nevertheless, some extra studies have been provided in the reference that are worth reading for those who would like to read more about how to cater for the different learning styles and which were not explained in details in this study but for sure it will add some significance benefits to those who are interested on this field.

6.4 Limitations of study

Since this is a small-scale research carried in a limited time, and the participated school at primary level had only 6 language teachers, who were luckily also class teachers, yet the number of the participants is still considered as small and limited, hence I acknowledge the fact that it is not possible to generalize my results.

Furthermore, due to teachers' busy schedule and it was near the end of school term, it was quite difficult to get all class teachers to participate in the stage of interviews; however this was overcome by involving all teachers during the questionnaires process.

Yet, the main barrier of this study was the language as it meant more effort and time spent in translation and double check of results was needed all way through the procedure of the study from a professional translator. Moreover, some difficulties at the stage of analysis emerged as even after the translations of the questionnaires there was one question were participants answered it not to the way was asked though all 6 teachers when asked about wither the questions were clear they all agreed that all questions were "clear" and one of them commenting "too clear".

However, at the end of this research I can say that the efforts and time spent were worth it. Perhaps if time was permissible more interviews and prolonged observations could be carried and better results could be achieved in discussing the various strategies used by teachers in more depth, but due to the time limitation and the participation of only one school it was not possible to carry such procedures.

6.5 Recommendations

Overall, the positive results gained in this study had activated me as I mentioned before to initiate a similar study in Oman, as it would be interesting and useful to see if the findings could be replicated among Teachers for students with dyslexia in Oman. At the same time another study I could carry which I think I should carry in two stages one of which to investigate ways of "how to empower our students with dyslexia to know and use their learning styles", the second stage is to investigate "if empowering our students to know and use their learning styles does actually have an effect on their achievement on the long run", after all I believe that whatever research comes along its us as practitioners who could decide according to our circumstances if it works for us or not.

On the other hand, in the Czech context, perhaps more support should be given to teachers through ongoing opportunities in training about this new field of learning or at least training should be provided for new teachers about what are the best practice to meet the different needs of students and this could also involve observing model classrooms, as these experiences can also provide teachers with opportunities to plan and work with colleagues in order to act as significant feedback.

In addition, teachers could be encouraged to carry or study in a collaborative research to share their knowledge with their colleagues. As it's also hoped that the findings of this study will encourage more teachers to do more research in this field as the limited research on this field should not be considered by teachers as a barrier rather it should act as a catalyst for more practice base research from teachers themselves to prove or disprove some of these theories, and since some of us are considered as in charge then our role will be of much effect in encouraging teachers to carry their own research. Snider and Roehl (2007, p873) argued that *"teachers rely on intuition and practical*

knowledge because they lack a set of empirically derived practices and principles. And that the failure to base educational practice on sound research results in a perpetual cycle of innovation, which leads to endless trends according to teachers' beliefs and doesn't last for long". Hence, the lack of consensus about empirically based teaching practices promotes for the importance of teacher beliefs in education, which also calls for teachers to research their own school circumstances and systems. As to my believe all of us and especially teachers need to reflect on their teaching otherwise we won't get what we hope to get.

6.6 Summary

From the outset, the findings of this small scale study had changed my way of thinking to believe that learning styles if practiced right it will mean less competition between teachers about which is the best theory to use, it will mean empowering teachers to do their own research to decided what works better for them, it means more teacher being convinced with the practice of other teachers rather than following the views of researchers who never worked on the field of educating children with special needs, it will means better understanding of the issue of learning styles and most importantly it means to change the way of thinking from matching teachers strategies to students learning styles into empowering students to know and use their own learning styles. Hence, it leads to the aim of looking for ways of empowering our students with special needs to know their abilities and their likes and dislikes and to work as a team with teachers in improving our students' achievements. As Bragg (2007) suggested that for learning styles to be effective schools should empower their students to know and use their own learning styles and for those who are in charge should value all staff by renewing their confidence through training and to take teachers voice alongside students voice *"through flourishing in an environment of discovery, teamwork and trust"* (Bragg, 2007, p517)

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Appendix

APPENDIX 1 (a): translated questionnaires

Tento dotazník je součástí diplomové práce na Pedagogické fakultě Univerzity Karlovy a je určen respondentům z řad učitelů anglického jazyka a speciálním pedagogům.

Veškeré Vámi poskytnuté informace budou anonymní a budou určeny pouze k studijním účelům, není třeba uvádět žádná jména.

Při vylpňování dotazníku mějte, prosím, na paměti:

1. Není třeba uvádět Vaše jméno.

2. Přečtěte si, prosím, pečlivě, každou otázku se všemi uvedenými variantami odpovědí a vyberte možnost, která nejlépe vystihuje Váš postoj / Vaši situaci.

3. V otázkách s hodnotící škálou vyberte pro každou položku možnost, která nejlépe reprezentuje Váš názor na užívání strategií, směřujících k naplnění potřeb rozličných stylů učení Vašich studentů.

4. **Styly** učení jsou definovány jako rozličné způsoby jednání, které slouží jako ukazatele toho, jak se jedinec učí a adaptuje okolnímu prostředí. Styly učení jsou proměnami v chování jedince s ohledem na režim, ve kterém si nejlépe osvojuje informace; různí se ve způsobech, kterými se jedinec soustředí, zpracovává, ukládá a udržuje informace.

5. Pokud budete mít jakékoliv nejasnosti v zadání otázek, obraťte se na mne, prosím, s dotazem.

6. Vyplňte, prosím, dotazníky do dvou dnů.

Sestavila: Munira Al-Adawi pod odborným dohledem

doc. Radky Wildové (děkanky Ped. F UK)

Datum:

ČÁST 1: Prosím vyplňte Vaše **osobní úda**je zaškrtnutím (**√**) vyhovujícího výrazu nebo doplňte chybějící informace:

1. Pohlaví: Muž   Žena

2. Délka učitelské praxe: _____ let

3. Nejvyšší dosažené vzdělání v pedagogickém oboru:

   bakalářské   magisterské   doktorské   jiné (uveďte): _____

4. Jaký předmět vyučujete?

   anglický jazyk   český jazyk   jiný (prosím upřesněte): _____

5. Kolik studentů s dysleksií máte ve třídě?

   žádného   1   2   3   více než 3

6. Znáte nějaké teorie, které se zabývají styly učení? (Například teorie, která rozlišuje vizuální, poslechový či kinestetický styl učení.)

   Ano   Ne   Nevím

Pokud jste odpověděli "Ano", pokračujte, prosím, **částí 2 (a).**

Pokud jste odpověděli "Ne" nebo "nevím", pokračujte, prosím, **částí 2 (b)**

ČÁST 2 (a):

1. Uveďte alespoň jednu teorii učení, kterou znáte:

_____

2. O teoriích učení jsem se dozvěděl/a:

- četbou odborných časopisů či knih
- ve škole (od učitelů, speciálních pedagogů)
- na školení učitelů či prostřednictvím dalšího vzdělávání
- z internetu
- jiným způsobem (prosím, upřesněte):

_____

ČÁST 2 (b):

1. Označte následující tvrzení číslovkami 1-5 podle stupně důležitosti (1 - nejdůležitější, 5 - nejméně důležité):

V průběhu rozhodování o vzdělávacích metodách pro Vaše studenty berete v úvahu:

- schopnosti a omezení studentů _____
- čas, který Vám daná aktivita zabere v rámci curricula _____
- jak můžete využít co nejvíce studentské skupinové práce _____
- styly učení studentů _____
- materiály, jež máte k dispozici, které Vám pomohou realizovat Vaše nápady _____

ČÁST 2 (c):

1. Z uvedeného přehledu označte, prosím, jednu či více metod, jichž využíváte k určení stylu učení Vašich studentů:

- pomocí formalizovaného formuláře, který mám k dispozici z odborné literatury
- pomocí formuláře, který jsem si za tímto účelem sám/sama vytvořil/a
- pozorováním své třídy
- pomocí dotazníku, který dám k vyplnění studentům
- rozhovory se studenty a zjišťováním, co jim vyhovuje, co se jim líbí
- profil studetnty / studentský profil
- Mám dostatek učitelských zkušeností, takže nepotřebuji využívat žádnou metodu k určení stylu učení svých studentů.
- jiné (prosím, uveďte):

_____

ČÁST 3:

Pro každé tvrzení vyberte, prosím, jednu možnost, která nejlépe vystihuje Vaše **myšlenky** zakroužkováním příslušného čísla: 1 - důrazně souhlasím, 2 - souhlasím, 3 - nevím,

4 - nesouhlasím, 5 - důrazně nesouhlasím

Podle mého názoru	důrazně souhla-sím	souhla-sím	nevím	nesou-hlasím	důrazně nesou-hlasím
Naše vzdělávací politika jasně deklaruje, že musíme vyučovat své studenty v souladu s jejich stylem učení.	1	2	3	4	5
Je důležité zjistit styl učení našich studentů.	1	2	3	4	5
Domnívám se, že teorie učebních stylů jsou užitečné.	1	2	3	4	5
Domnívám se, že teorie učebních stylů nemají využití v učitelské praxi.	1	2	3	4	5
Nepotřebuji znát teorie učebních stylů, abych byl/a dobrým učitelem / dobrou učitelkou.	1	2	3	4	5
Jsem schopen / schopna určit styl učení svých studentů bež využívání teorií učebních stylů.	1	2	3	4	5
V průběhu rozhodování, které vzdělávací metody využiji v hodině, vždy beru v úvahu styl učení svých studentů	1	2	3	4	5

ČÁST 4:

Díky tomu, že budu znát **styly učení svých studentů:**

Podle mého názoru	důrazně souhla-sím	souhla-sím	nevím	nesou-hlasím	důrazně nesou-hlasím
Budu potřebovat víc času na plánování a realizaci jednotlivých aktivit:	1	2	3	4	5
Učení bude pro všechny pozitivním zážitkem:	1	2	3	4	5
Podpoří to všechny studenty k účasti ve výuce:	1	2	3	4	5
Budu naplňovat potřeby všech studentů (všichni z toho budou moci profitovat).	1	2	3	4	5
Bude to náročné kvůli problémům s chováním některých studentů.	1	2	3	4	5
Bude to vyžadovat využívání většího množství učebních materiálů pro různé aktivity.	1	2	3	4	5
Bude třeba vynaložit větší pedagogické úsilí.	1	2	3	4	5
Studenti poznají a uvědomí si svůj styl učení.	1	2	3	4	5

ČÁST 5:

Rozhodněte, do jaké míry by Vám mohly následující faktory usnadnit vzájemné propojení Vašich pedagogických metod s učebním stylem Vašich studentů:

Podle mého názoru	důrazně souhla-sím	souhla-sím	nevím	nesou-hlasím	důrazně nesou-hlasím
Dostatek dostupných zdrojů (finanční podpora, curriculum materials, pomůcky, vybavení, atd.).	1	2	3	4	5
Příležitosti k rozvíjení pedagogů v oblasti teorií učebních stylů.	1	2	3	4	5
Další vzdělávání, zaměřené na diagnostiku učebních stylů a jejich propojení s výukou.	1	2	3	4	5
Rodičovská podpora	1	2	3	4	5
Čas plánovat	1	2	3	4	5
Naučit se, jak bych mohl/a své studenty poučit o jejich učebním stylu, aby si toho byli sami vědomi	1	2	3	4	5
Menší počet studentů ve třídě	1	2	3	4	5
Učitel ve třídě navíc (pomocný učitel, asistent učitele)	1	2	3	4	5
Příležitost pozorovat zkušené pedagogy při práci	1	2	3	4	5

ČÁST 6:

Které z následujících faktorů by Vám mohly zkomplikovat zavádění rozličných pedagogických metod, potřebných k naplnění potřeb různých stylů učení ve Vaší třídě?

Podle mého názoru	důrazně souhla- sím	souhla- sím	nevím	nesou- hlasím	důrazně nesou- hlasím
Kázeňské problémy studentů	1	2	3	4	5
Nedostatek materiálů a dalších zdrojů	1	2	3	4	5
Chybějící administrativní podpora	1	2	3	4	5
Nedostatek potřebných znalostí o různých stylech učení	1	2	3	4	5
Velký počet studentů ve třídě	1	2	3	4	5
Časová omezení	1	2	3	4	5
Curriculum	1	2	3	4	5

ČÁST 7:

Uveďte, prosím, jakékoliv Vaše komentáře a poznámky, týkající se propojení pedagogických metod s učebním stylem studentů:

_____

_____

Bylo snadné odpovídat na otázky v tomoto dotazníku?　　　Ano　　　Ne

Které otázky se Vám líbily a proč?

_____

_____

Zkontrolujte, prosím, zda jste zodpověděli všechny otázky.

Děkuji Vám za spolupráci a Váš čas!!

APPENDIX 1 (b): questionnaires in English

This questionnaire is part of master degree at Charles University, and should be answered by language teachers and SEN teachers.

All the answers of the questionnaire will remain anonymous and will be used for the purpose of the study only, no names required to be mentioned.

Please remember:

- No need to write your name.

- Read every question with its all answers then choose the answer that most applicable to you.

- For each item on using the rating scale, give the answer that best represents your opinion about using a variety of strategies to meet the needs of your students' different learning styles.

- Learning styles is defined as: Distinct behaviors that serve as indicators of how one learns and adapts to the environment. Learning styles are variations in one's behavior regarding the mode in which individuals prefer to acquire information; how one prefers to concentrate, process, absorb, and retain information.

- If any question is not clear please feel free to ask

- Your valuable answers will be collected within two days

Written by: Munira Al-Adawi

Date:

Supervised by: Dr Radkha (the Dean of Charles University)

PART 1 Please complete the following **personal information** by placing a mark (�V) in the space provided or by filling in the blank.

1- Gender: ☐ Male   ☐ Female

2- years of teaching experience: _____years

3- Highest Degree Obtained in the field of education:

☐ Bachelor's   ☐ Master's   ☐ Specialist   ☐ Doctorate

4- What subject do you teach?

☐ English Language   ☐ Czech language   ☐ other (please

specify_____)

5- Please specify how many students with dyslexia are there in your classroom:

☐ None   ☐ 1   ☐ 2   ☐ 3   ☐ more than 3

6- Do you know any theories that talk about 'students learning styles'? For example

the (VAK) theory that talks about the visual, auditory, or kinesthetic learners.

☐ Yes   ☐ No   ☐ I don't know

- If your answer was (yes) please go to **part 2(a)**

- If your answer was (No) or (I don't know) please go to **Part2 (b)**

Part 2 (a)

1) Write at least one of LEARNING STYLES theories that you know

_____

2) I came to know about learning styles through:

☐ Reading journals, books

☐ At school (from teachers, head teachers, special teachers)

☐ During teacher training or in-service training

☐ Internet

☐ Other, please specify _____

Now please continue answering the remaining parts of the questionnaire

Part 2 (b)

1) Please ranks the following from 1- 5 according to its importance to you, 1 is more important and 5 is the least important

Before you design your teaching methods for your students you always think of:

☐ Student abilities and disabilities

☐ Time you will need to finish all activities in the curriculum.

☐ How can you encourage more student group work

☐ Students learning styles

☐ The materials which are available for you to implement your ideas

Part 2 (c)

- Please choose from the list one or more ways that you use to identify your students learning styles?

☐ Using check list that I have from journals and books

☐ Using check list that I have developed myself

☐ Observation of my classroom

☐ By providing questionnaire to my students

☐ By talking to my students and asking them what they like

☐ Students' profile

☐ I have good teacher experience so I don't use any identification instruments to identify my students learning styles.

☐ Other, please specify_____

Part 3

For each item, select one adjective that best describes your **thoughts** by circling the appropriate number: number (1) I strongly agree, (2) I agree, (3) I don't know, (4) I disagree (5) I strongly disagree

In my opinion	Istrongly agree	I agree	I don't know	I disagree	I strongly disagree
Our school policy states Cleary that we have to teach our students according to their learning styles	1	2	3	4	5
It's important to identify our students learning styles	1	2	3	4	5
I think learning styles theories are useful	1	2	3	4	5
I think learning styles theories are not practical to be used by teachers	1	2	3	4	5
I don't need to know about the theories of Learning styles for me to be a good teacher	1	2	3	4	5
I do identify my students learning styles without using the theories of learning styles	1	2	3	4	5
I always think of my students learning styles before I design my teaching methods in my lessons	1	2	3	4	5

Part (4)

In my experience by identifying my **students learning styles**:

In my opinion	Istrongly agree	I agree	I don't know	I disagree	I strongly disagree
I will need more time to plan and do different activities	1	2	3	4	5
It will make learning a good experience for all	1	2	3	4	5
It encourage all students to become participants	1	2	3	4	5
I will meet the needs of all students (all benefit)	1	2	3	4	5
It will be difficult because of some students behavior problems	1	2	3	4	5
It requires more materials to be used for activities	1	2	3	4	5
It requires more teacher effort	1	2	3	4	5
It will make my students aware of their own Learning styles	1	2	3	4	5
I will need more time to plan and do different activities	1	2	3	4	5

Part (5)

Indicate to what extend the following factors could make it easy for you to match your teaching strategies with your students learning styles?

In my opinion	I strongly agree	I agree	I don't know	I disagree	I strongly disagree
Having available resources (funding, curriculum materials, supplies & equipment, etc.)	1	2	3	4	5
Staff development opportunities on learning styles theories	1	2	3	4	5
In-service training in how to implement Learning styles	1	2	3	4	5
Parental support	1	2	3	4	5
Time to plan	1	2	3	4	5
Learning how to make our students more aware about their own learning styles	1	2	3	4	5
Small classes of students	1	2	3	4	5
An extra teacher in a classroom (like support teacher)	1	2	3	4	5
Observing good practice	1	2	3	4	5

Part (6)

What things could happen that might make it difficult for you to implement various teaching strategies to meet the needs of different learning styles in your classroom?

In my opinion	Istrongly agree	I agree	I don't know I disagree		I strongly disagree
Students Behavioural problems	1	2	3	4	5
Lack of materials and resources	1	2	3	4	5
Lack of administrative support	1	2	3	4	5
Lack of appropriate knowledge of the different Learning style	1	2	3	4	5
Big classrooms	1	2	3	4	5
Time limit	1	2	3	4	5
Curriculum	1	2	3	4	5

Part (7)
Please provide me with any other useful comments regarding matching teaching strategies with students learning styles?

Was it easy to answer the questions? ☐ Yes ☐ No
Which questions you didn't like? And why?

Please check to see that you have responded to all items. Thank you for your cooperation and time!!

APPENDIX 1 (c): first analysis of the answers obtained from the questionnaire

PART 1 Please complete the following **personal information** by placing a mark (**v**) in the space provided or by filling in the blank.

7- Gender: 2Male   4 Female 6 language teachers

8- years of teaching experience: male (11,33) female (2-19),2,4,9,19

9-   Highest Degree Obtained in the field of education:

   1 Bachelor's   5Master's 2male

10- What subject do you teach? ☐   English Language   ☐   Czech language   ☐

   other (please specify_____) they all teach all subjects at primary level grades 1-5

   such as (math, music, art, work tuitions, physical education, geography)/ one teaches

   math's and sport for 3rd year

11- Please specify how many students with dyslexia are there in your classroom:

   ☐None   ☐ 1   ☐ 2   ☐ 3   ☐more than 3 all had at least

one student with dyslexia except one who didn't have any students with dyslexia, one who

have 2 students diagnosed but has suspicion of the others too.

12- Do you know any theories that talk about 'students learning styles'? For example the

   (VAK) theory that talks about the visual, auditory, or kinesthetic learners.

☐Yes   ☐No   ☐don't know female 3 yes 1no

Male 1 yes 1no (so expect 4 teachers to answer all parts of part2 (a)

- If your answer was (yes) please go to **part 2(a)**

- If your answer was (No) or (I don't know) please go to **Part2 (b)**

Part 2 (a)

2) Write at least one of LEARNING STYLES theories that you know _____1male 2female answered this <u>so 3 out of the 4 who said they know about it wrote about some of the theories analyse their answers</u>

1) She explained the meaning of VAK theory cognitive, language, logic and mathematic, the visual space motor, interpersonal theory.

2) Montessori theory

3) zonova learning theory

2) I came to know about learning styles through: all 4 answered this part

  4 Reading journals, books

  3 female all (not the male) At school (from teachers, head teachers, special teachers)

  1 female During teacher training or in-service training

  4 Internet

Part 2 (b)

1) Please ranks the following from 1- 5 according to its importance to you, 1 is more important and 5 is the least important

Before you design your teaching methods for your students you always think of:

- Student abilities and disabilities this was marked as the highest with all 6 teache
- Time you will need to finish all activities in the curriculum. 5 considered as the last thing they think about it
- How can you encourage more student group work 3 least important 3 important but not the first thing they think about it

Students learning styles 3 considered it least important &3 important but not the first thing they think about it!!

- The materials which are available for you to implement your ideas 2least important but 1 most important 2 important but not the first thing they think about it so just the 3rd place after abilities and group work

Part 2 (c)

- Please choose from the list one or more ways that you use to identify your students learning styles?

  0   Using check list that I have from journals and books

  1   Using check list that I have developed myself male check interview answer

  6   Observation of my classroom all

  0   By providing questionnaire to my students

  3   By talking to my students and asking them what they like 1male but not the one interviewed good point of discussion 2 female

  3   Students' profile 2male 1female

  0   I have good teacher experience so I don't use any identification instruments to identify my students learning styles.

Part 3

For each item, select one adjective that best describes your **thoughts** by circling the appropriate number: number (1) I strongly agree, (2) I agree, (3) I don't know, (4) I disagree (5) I strongly disagree

In my opinion	Istrongly agree	I agree	I don't know	I disagree	I strongly disagree
Our school policy states Cleary that we have to teach our students according to their learning styles		3	2male Femal less exp	1female dn know abt LS 9yrs exp	
It's important to identify our students learning styles	1	5			
I think learning styles theories are useful	2	2	2		
I think learning styles theories are not practical to be used by teachers			2	4	
I don't need to know about the theories of Learning styles for me to be a good teacher		1	1	3	1
I do identify my students learning styles without using the theories of learning styles		1	2	2	1
I always think of my students learning styles before I design my teaching methods in my lessons		4		2	

Part (4)

In my experience by identifying my **students learning styles**:

In my opinion	Istrongly agree	I agree	I don't know	I disagree	I strongly disagree
I will need more time to plan and do different activities	1	3	1	1	
It will make learning a good experience for all		5	1		
It encourage all students to become participants		2	4		
I will meet the needs of all students (all benefit)	1	3	2		
It will be difficult because of some students behavior problems	1	3	2		
It requires more materials to be used for activities	1	4	1		
It requires more teacher effort	1	4	1		
It will make my students aware of their own Learning styles		3	3		

Part (5)

Indicate to what extend the following factors could make it easy for you to match your teaching strategies with your students learning styles? Various

In my opinion	I strongly agree	I agree	I don't know	I disagree	I strongly disagree
Having available resources (funding, curriculum materials, supplies & equipment, etc.)	1	4	1		
Staff development opportunities on learning styles theories		4	2		
In-service training in how to implement Learning styles		5	1		
Parental support		3	3		
Time to plan		6			
Learning how to make our students more aware about their own learning styles		4	2		
Small classes of students	3	2		1	
An extra teacher in a classroom (like support teacher)	2	3	1		
Observing good practice	2	3	1		
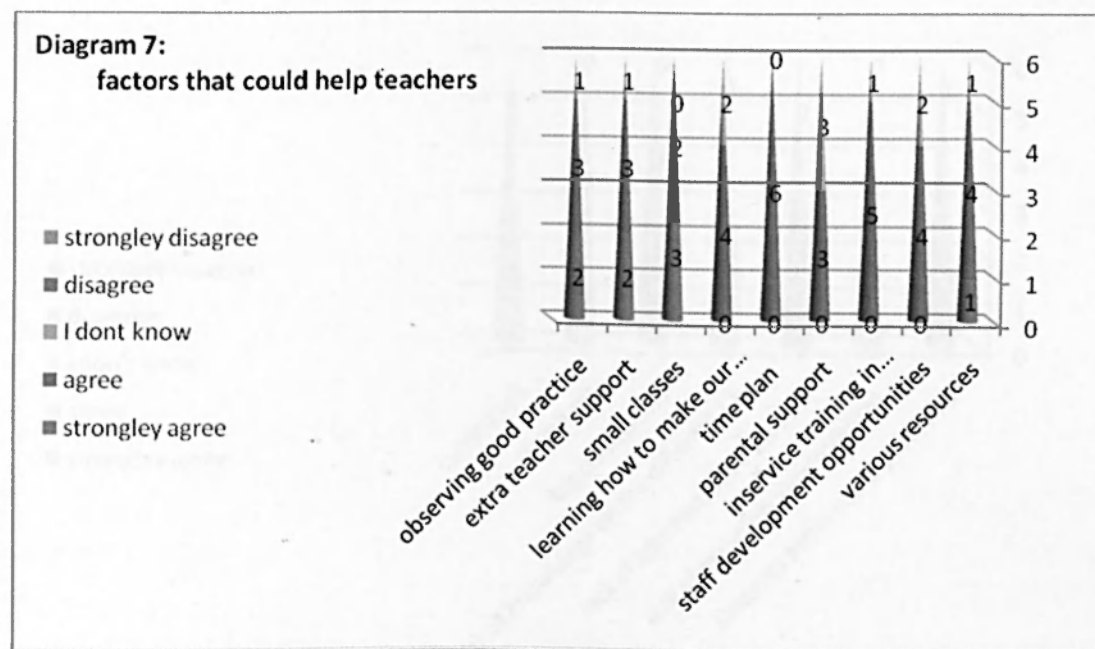
Diagram 7: factors that could help teachers

Part (6)

What things could happen that might make it difficult for you to implement various teaching strategies to meet the needs of different learning styles in your classroom?

In my opinion	I strongly agree	I agree	I don't know	I disagree	I strongly disagree
Students Behavioural problems		5		1	
Lack of materials and resources		5	1		
Lack of administrative support		4		2	
Lack of appropriate knowledge of the different Learning style		4	1	1	
Big classrooms	2	4			
Time limit	2	3	1		
Curriculum		3	1	2	
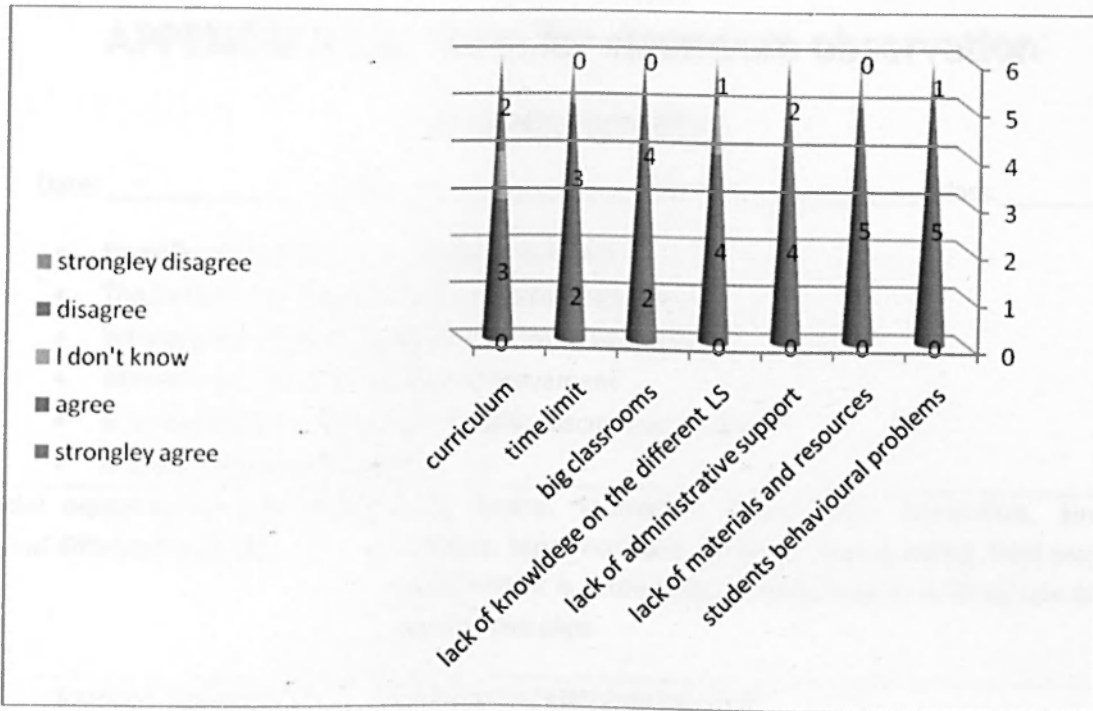
Chart legend:
- strongley disagree
- disagree
- I don't know
- agree
- strongley agree

Categories: curriculum, time limit, big classrooms, lack of knowldege on the different LS, lack of administrative support, lack of materials and resources, students behavioural problems

Part (7)

Please provide me with any other useful comments regarding matching teaching strategies with students learning styles? 3 comments

1- Mostly in the classroom there are student with different learning styles so work is individual, it's good to know the theories but only the practice shows what kind of teacher you are.

2- I have no idea why we use the saying "teaching through playing" when everybody is refereeing to theories, I was a graduate from the pedagogic faculty but I had to forget all 'the nonsense' that they taught me in order to hold up with my pupils in my class.

3- both influence each other, and education

Was it easy to answer the questions?   Yes | 5 | No | 1 |

Which questions you didn't like? And why? Because the questions were very clear

APPENDIX 2 (a): form for classroom observation

Classroom observation

Date: _____ Time: _____ Lesson: _____ class: _____

- Number of students ------- dyslexia students --------
- The layout of the class (rows/groups/changeable)
- Where is the dyslexic student seat (front/back/group/................
- Where is the teacher seated and movement
- Is he involved (group, work, reading, discussion, writing,)
- Is there special assistance.----------

special equipments/ materials/ several different methods	black board, interactive board, ICT, computers, kinaesthetic activities, tape recorders, drawing, singing, acting, field project, time management is it too long, working load or writing, Use of pictures cards) video clips
Students behaviour	quite/cooperative/raising hand
activities	Group/ individual/ peer support/ kinaesthetic activity/visual
Feedback from teacher	individual verbal only /oral and written
Classroom environment	Light Heat/weather High light the use of different colours
Teachers instructions	verbal only/verbal & written
Students profile/work and hand written	
Other comments	

Look for evidence of some of these themes:
- Displayed learning styles.
- Evidence of planned instructional activities that address learning styles.
- Evidence of teacher using problem solving of critical thinking.
- Evidence of students experiences of alternative classroom assessment.
- If the teacher moves and interact with those who have dyslexia/ is it the responsibility of the assistance.

APPENDIX 2 (b): classroom observation of class (G3)

Classroom observation (1)

Date: 7/5/2009   Time: 10 am Lesson: Czech language (grammar lesson) class: grade 3

- Number of students 23 dyslexia students 4 and one of them with ADHD & dyslexia
- The layout of the class was mainly in rows but the teacher worked also with the group of students with SEN in one group while the rest of the class had individual activity.
- Where is the dyslexic student seat (front/back/group) some who had also ADHD were seated in the front of the classroom and one of them was seated at the back see diagram 1 to get an overview of the classroom organisation.
- Where is the teacher seated and movement mainly standing or moving at the front of the classroom
- Is he involved (group, work, reading, discussion, writing,)? The lecture involved individual and group work, discussion as well as writing activities and
- Is there special assistance in the classroom? No

Diagram 1 shows were the students with dyslexia or SEN were seated

special equipments/ materials/ several different methods	• The teacher used black board, interactive board and kinaesthetic activities as he encouraged and leaded physical movements such as standing at certain points of the time after 10 minutes of the starting time of the class by involving hands and body movement for all students of the class to help SEN students. • time management: the time was well organised from one activity to another as each activity did not take more than **10 minutes** By using interactive board it was possible for students to Use pictures and to use kinaesthetic and tactile styles by answering through moving certain pictures and words at the board as well as the interaction was in two ways (teacher student and student teacher) as they had the chance to ask some questions of clarification, and the teachers using the interactive board looked for a picture to clarify their question.
Students behaviour	Cooperative and they answered in turns so everyone got chance to be involved
activities	Group, individual, kinaesthetic and visual activity generally it was a multi sensory activity though one of the students with dyslexia who is seated at the back was most of the time not paying attention when there was a whole class activity. And not having any assistance made it easier for the child not to pay attention and much harder for the teacher to pay attention to the child with a class with more than 7 students with SEN. Sometimes there were peer support involved during the lesson
Feedback from teacher	Depended on the situation mainly it was individual using verbal, oral and in some times written format with pictures to clarify his feedback using the interactive board
Classroom environment	Light (on and Off according to the activity) Heat/weather the teacher responses to the change of weather to warm by opening the door the use of different colours he used very clean black board with different coloured written instructions
Teachers instructions	oral & written in certain cases for those who had to do different activities
Students profile/work and hand written	Generally their work and handwriting was neat and clear as I observed their special notebooks provided by the teacher during the interview
Other comments	• There was not too much displayed materials on the classroom • The teacher told a story of a name that was used during the lesson. • Generally Students are very well involved with the lesson and

interested on the lesson until the last minute

- **Teacher used some form of humour to explain the difference between some Czech words such as the link between the name of Prague airport and prison.**

- He used puzzles with the dyslexia students.

- There was an evidence of planned instructional activities that address all learning styles as after 20 minutes of the lecture all students had to write words to form pre positions and write sentences from the words, the other students with specific needs such as dyslexia and ADHD used the interactive board to choose the same words in more simplified way, as some they had the sentence written for them they only had to choose the words, and the activity also covered from easy to more complex one.

- After that the SEN students had group interactive activity were they had to sit in the floor with the teacher to complete and discuss their task.

APPENDIX 2 (c): classroom observation of class (G5)

Classroom observation (2)

Date: 20/5/2009   Time: 9am   Lesson: Czech language   class: grade 5

- Number of students 26 dyslexia students 4
- The layout of the class: students seated in rows
- Where is the dyslexic student seated: check diagram 2
- Where is the teacher seated and movement: mainly in the front but moves during the lessons between students to check their work
- Is she involved in (group, work, reading, discussion, writing,): mainly whole class activity
- Is there special assistance? Yes two special assistance

special equipments/ materials/ several different methods	she only used black board and some activities relating to auditory learning style
Students behaviour	Cooperative very active and talkative, some ask for help and some work quietly but generally the environment is noisy
activities	Group activity with some form of auditory activity where the three teachers say one word to the ears of the first students and the students have to say it to the next students until it reaches the last students
Feedback from teacher	individual in some cases and group feedback but verbal only
Classroom environment	Light same all the time as the lighting of the class was good Heat/weather she opened the windows for some air the use of different colours: there was no use of different colures even for activities there was no pictures or colours it was mainly verbal instructions without any clues or pictures for those with SEN
Teachers instructions	verbal only During the paper activity which was after 20 minutes of the lesson the instructions were only verbal but the teacher read the question for the whole class
Students profile/work and hand written	Was not possible to observe as the lesson finished and the teachers still doing activities with the students
Other comments	• Students felt free to talk it's a good point but for other students might be distracting • The teacher discussed with the assistance the activities and they cooperated in the class but at certain points on of the assistance

	took the lead of managing the class.
	• The teacher tried to read the passage to the whole class in a appropriate speed so that students can write what they hear and the assistance worked closely to their students.
	• After 20 minutes of the lesson the assistance worked with two students on the same task of the whole class but in a corner especially for them so they got more chance to write and ask for help, but her instructions were only verbal.
	• After that she moved into educating the students the basics of language and she combined with counting from 1- 10 using their hands, and she used a ruler to show them how to subtract, students were enjoying the activity.
	• The students were involved in their task but somehow finished earlier seemed like they had nothing to do
	• After 40 minutes: the teacher read the questions and she wrote the page number at the board and she used the same activity of talking on the ears of the students but the time finished before everyone finishes the activity.

APPENDIX 2 (d): classroom observation of class (SC)

Classroom observation (3): special class

Date: 20/5/2009   Time: 10 am   Lesson: learning support   class: 3

- Number of students 2 with dyslexia
- The special teacher works with the students in different activities individual and group. student were involved in reading, writing and discussion

special equipments/ materials/ several different methods	black board, , kinaesthetic and concentration activities, drawing activity for eye and hand coordination activity time management was really good and the teacher changed the activities every 10 minutes she also used competition with her students
Students behaviour	Cooperative and they were enjoying to work in their own peace the teacher also encouraged them to individual work
activities	Group/peer/ individual (competition) / kinaesthetic, visual, audible and concentration activities/ memory activities, written activities
Feedback from teacher	individual and group feedback sometimes verbal with written feedback
Classroom environment	Light ok Heat/weather ok High light the use of different colours no
Teachers instructions	Oral only
Students profile/work and hand written	Students work were very neat and clear and good handwriting
Other comments	• There is evidence of planned instructional activities that address all learning styles. • Evidence was provided that students experience alternative classroom assessments and activities • Teachers instruction encouraged critical thinking for the students • During the 1st 10 minutes: paper activity diagram for concentration+ eye and hand coordination, then check and revision for grammar activity, then completed the sentences with right words and they have to explain the reasons of their choice • At 10 minutes: reading text individual and in peers, and explaining

	the text
	- 15 minutes: activity on punctuation
	- 20-25 minutes: activity contains concentration, memory and kinaesthetic aspect, where they had to remember many objects after been covered by the teacher and then they had to do competition on writing in the board the names of the objects that they can remember, and then they had to check their answer themselves.
	- 30 minutes: audible activity: were they had to repeat the word of the teacher and add on it one word to form appropriate sentence and the teacher played with them providing them with the right feedback and time to remember and response.
	- 35 minutes: students had to response to the words of teachers by saying the opposite of the word so to practice their understanding and remembering too
	- 37 minutes: homework instruction in verbal and written format it was like crosswords where they had to write the sentences in structures
	- Students were involved and interested with good concentration throughout the lesson.

APPENDIX 3 (a): Guidelines questions for the interviews

<u>Teacher's interview</u>

Provide meaning of learning styles to the teacher and your study then start the interview

<u>Teachers and classroom background</u>

- How many Years of teaching experience you have?
- Qualification? Do you have any SEN/ dyslexia training?
- What subjects do you teach? What grade to you teaches?
- Do you have any SEN students in your classroom? How many are they with dyslexia?
- How do you assess them?

<u>Knowledge of learning styles and its theories</u>

- In your opinion what is the meaning of LS? Do you know anything about learning styles? What comes up to your mind when I talk about learning styles?
- What LS theories you know or heard of?
- How did you know about it?
- Do you identify your students learning styles? How? Observation Individually/groups/ asking questions/check list...etc (ask for checking list if available)
- Did you get any training on identifying your students LS?
- Does your school policy state anything or specific steps to identify your students learning styles?

<u>Implementation of learning styles in the classroom</u>

- After you identify the learning styles what do you change in order to meet the needs of your dyslexic students according to their learning styles?
- What accommodation you make to make sure that you meet your students learning styles?
- Do you discuss with parents and SEN teachers about your students learning styles?

<u>Involving students in knowing their learning styles</u>

- Do you ask your dyslexic students about their learning styles? What they like and dislike? How do you do that? Formally non formal?
- Have you ever asked your students using questionnaires about their learning styles? & why?
- Do you think it's important to conduct such questionnaires? & why?
- How do you involve other students to help your dyslexia student?
- Do you think your students are aware of their own learning styles? What makes you think that your students are aware of their own styles?
- Do you think is hard to make students aware of their own Learning styles? & why?

<u>Advantages & disadvantages</u>

- In your opinion do you think it's important to know about theories of learning styles?
- What do you think of using check lists and questioners to know about your students learning styles? & why?
- What are the advantages of identifying and applying the strategies according to the different learning styles?
- What are the disadvantages?
- What helps you to apply different strategies to different learning styles?
- What you support you think you need in order to do better in the field of learning styles?
- Would you like to get training in learning styles theories?

<u>Guideline for the dyslexia specialist interview</u>

* How many years you have been specialist in dyslexia? Do you have experience in working with any other SEN students?

* Where can I get information about your center?

* How many years you have been supporting Curie school?

* How many students with dyslexia you support at Curie school?

* What kind of assessment you use to diagnose and identify dyslexic students? (In general)

*generally what support you provide for the schools and for students with dyslexia?

* How do you help teachers to identify students learning styles?

*how you makes sure that they are accommodating for students learning style?
* does the IEPs that you provide to teachers shows the students' learning styles and how to accommodate for it?

* is it possible to provide me with example of how learning styles is available in IEPs for teachers?

* Is there any support that is provided to the teachers to identify and accommodate for their students learning styles during the school year? What is that support?

* do you think teachers need special training in learning styles in order for them to meet their students learning styles?

* In your opinion what is the best way to accommodate for the learning styles of students with dyslexia?

* In your opinion what should be provided by the school or teachers in the classrooms to accommodate for the different learning styles of students with dyslexia?

APPENDIX 3 (b): the interview of the principle of the school

Interview with the principle of the school

I provided an overview of my education system in Oman and related to my study and what I'm intended to achieve from this research, confidentiality was garneted and all video tapes and results were made clear that will be provided to the school at the end of the study. The principle commented that there is no need to provide copy of the tapes but It will be good to know the results of the research.

General information

- *How many years you have been as a headmaster at this school?*

  For 5 years and I have work experience in the field of education for 32 years

- *How many students in the whole primary school?* 207 students

- *What is the average student's numbers in the classrooms?* 21

- *How many students with dyslexia are there in your school?* 20 or more not sure of the exact numbers

- *When do you start to identify students with dyslexia?* Age6 grade1

- *How many SEN teachers in your school?*

  Almost 5 teachers because we have a lot of assistance so I'm not sure of the exact numbers

- *How many are specialist in dyslexia?*

  One specialist teacher but none as mainstream class teacher

- *Do SEN support all classes or only primary level?*

  All depending on the case

Provision for students with dyslexia

- *What provision or support the school provide for students with dyslexia? Special classes/regular classes?*

We have both as we have assistances that support students in regular classrooms and we have special classes supported by special teacher and who take students in her class according to their needs at certain times of the day.

- *Do you provide IEP for all students primary to secondary?*

  Yes we provide for all

Teacher training

- *Are all regular teachers trained to teach students with dyslexia?* No
- *Are they trained in theories of learning styles? If not why?*

No " I think it's important to know the steps and to use different methods but not necessary to involve students in learning styles not even necessary to know the theories because teacher get training and they are good at teaching, so it is not necessary to know about the theories of learning styles to be good teacher"

- *Have you ever provided any in-service training about the different LS for teachers?*

  No
- *During your work experience do you think your teachers are willing to identify & meet the learning styles of your students?*

  Yes some they are really good teachers
- *What makes you think that they are doing the right identification?*

  Because as I said they are good experience teachers
- *Does your school policy states something about learning styles and how teachers should apply it in practise? Is it possible to have copy of your policy?*

No, because that comes with from the special centre that we cooperate with regarding our students with learning needs.

Learning styles

- *Do you know any theories that talk about learning styles? Such as the VAK Theory?*

  No
- *Have your teachers ever conducted training for their students in how to know and use their own learning styles?*

"No because it's not up to the kids"

- *Do you or are you intending to provide any training about learning styles and how to make students aware of their own learning styles? & why?*

Maybe through teams where teachers train other teachers, we might also ask for outside training or in-service training regarding this matter.

- *Well since you mentioned that you don't know a lot about the theories of LS, do you still think it's important to have general idea about it?*

"I think it's important to be aware that there are different learning styles like visual audible or kinaesthetic and tactile styles, but not necessary to know about the theories, and I think we are doing well because for example for learning English for students with dyslexia at our school

we encourage them to speak more than writing and it depends on the needs of the students, by this way we do think of their needs".

- *Thanks a lot for your cooperation, your opinion is very valuable to my study*

APPENDIX 3 (c): the interview of the teacher of (G3)

Interview of the 3rd grade mainstream teacher

I started by provide meaning of learning styles to the teacher and explaining the aim and overview of my study, confidentiality was also mentioned. The interview was after the classroom observation.

Teachers and classroom background

- *How many Years of teaching experience you have?*

11 years

- *Do you have any SEN Qualification OR dyslexia training?*

No I don't have qualification but I have some in-service training about dyslexia and during my study at Charles university we took some course on special needs

- *What subjects do you teach? What grade to you teaches?*

In my primary level cycle one I teach everything I mean all subjects like mathematics, Czech language except English, I don't teach secondary level, so I usually stay with my students from grade 2-5

- *What about your class that I observed do you teach them only Czech language or other subjects as well?*

I teach them all subjects like mathematics, science hmmm all subjects except English

- *Do you have any SEN students in your classroom? How many are they with dyslexia?*

8 students with SEN

- *And how many with dyslexia?*

With dyslexia hmmm I have ,,,,,, 4 students

- *I have a diagram of your classroom here with me is it possible to show me where are they seated?*

Some on the front and one at the back in the diagram they are seated here, here and here, I have two ADHD and they are seated here.

- *The two ADHD are also with learning difficulties?*

Yeah but not all as one with ADHD & gifted and the other one is ADHD with dysgraphia and dyscalculia. I also have 9 gifted children in this classroom. So basically I have (8

with SEN 4 of them with dyslexia 2 with ADHD the other ones have dysgraphia and dyscalculia)

- *How do you assess your students with dyslexia?*

Usually they go to the special center to get assessed, at the start of the 2nd grade not the 1st grade as a Czech language teacher when I see something wrong with the child in reading or writing I write a report and then I send him/her to the special center for assessment.

Knowledge of learning styles and its theories

- *Have you ever come across or do you know about some of the theories of learning styles such as the VAK theory which caters for visual, audible or kinesthetic and tactile styles?*

Yes, yes I know about it

- *So when I mention theories of learning styles or just the terminology of learning styles what comes to your mind?*

The practice confirm to me is that it's important to know about these theories because some students need to play, to see, to touch, or sometimes I have t repeat things from 1-5 times for those who have SEN in different ways. But when you take course on learning styles you see the general information on how to teach but only practice teaches you how to teach such students.

- *Do you know any learning style theories?*

"I know some of the theories but one theory can't show you everything in how to cater for all kids, children are very different in practice, so it does not work for all children."

- *Ok but did you get any training about how to use learning styles and how to put into practice? Or is there any other means that you use to know about these theories or to get better understanding of how to use it?*

Not really it's mainly from my teaching practice. The headmaster invites the professional who assesses the kids and the professional brings some theories in order to evaluate the SEN and for me it's an opportunity to learn about the theories of learning but at the same time for me I can see that they don't always work

- *So in your opinion why do you think these theories don't always work in practice?*

"I think these theories don't work because they are made up by people who have never been in teaching and this is my opinion."

- *So is there a policy at your school saying about how to use learning styles or is it just the traning that you got genearly about learning styles? Does your school policy state anything or specific steps to identify your students learning styles?*
Hmmmmmmmmmmmmmm, how to teach ,,,no I don't think so,,

- *So how do you get to know your students learning styles? Do you use specific procedure to identify who is visual, kinesthetic or audible?*
Mainly I use my experience and observation during activity and I observe their level of involvement in the activity.

<u>Involving students in knowing their learning styles</u>
- *Have you ever used check list or questionnaires for your students to know their own learning styles or at least to know what kind of activities or materials they prefer?*
No I don't because they are too small to answer

- *Do you think if they were abet older like in grade 5 would you use the questionnaires for them?*
Yes I can imagine using but if the kid has SEN I will have to read it for him and even repeat to make them understand my questions, because there is always a degree of not understanding what I want from them.

- *So Just to clarify then you would ask them about what they prefer as their own learning style, for example would you ask them if they like group or individual learning if they like more kinesthetic activities or any other form of activities?*
Well I don't do that and I think it's not appropriate that I do everything for the students, and it's not my point to take all the obstacles (and like put the students in glass house) then they won't be able to exist in the real life they have to go through everything.

- *So why do you think it is not that important or so difficult to ask the students?*
Hmmmmmmm, ahhhh, I think we do ask the students what they like but we don't ask them literary how do you want to learn. We ask them about their opinion and what happens around them about the world; they have the option and choose what they want to experience act, draw, writing, so they have options of ways of expression. But I don't ask them about their feelings, as too many of them have SEN.
For practical example is the task they choose to work in any 4 of the groups according to the way they want to express the task.

- *I could tell from my observation that you were trying your best to meet the needs of all students, but do you think there is anything that could be changed in your classroom to make it easier for you to accommodate in a better way for your students needs including those with dyslexia?*

Less children in the classroom, due to the fact of a lot of gifted and SEN students so It's necessary for me to prepare work for the different groups, as I can't make lesson plan and just adjust it to the other two teams of students so I have to have 2 teams of lesson plans, which results of different activities at the same time

- *Since you have many SEN students in your class, do you get any support of assistance in your classroom or at certain times of the week?*

No I don't

Implementation of learning styles in the classroom

- *But I have observed other classrooms with assistance?*

Ha ha well yeah maybe because I'm a man so I'm more in control and there is more foreign students in other classes with different culture background and so they might not consider a women as an authority so they support them with assistance.

- *What about homework for your students with dyslexia do you think about their learning styles or do you just think about their level of needs?*

It depends, in sometimes if they can handle it they have the same homework like any other students, but if there is a project I can differentiate it therefore, some homework differ so they might have to work on Saturday and Sunday with their special note books, so extra amount of homework, they need to work in themselves more.

- *The teacher showed me students' notebooks and said* It is necessary to give something different from the rest of the class and the class has to accept it.

Advantages & disadvantages

- *Do you think by knowing the different learning styles of your students like visual or any other style add benefits to your practice for example does it empower you to teach in a better way?*

Probably yes, because I use the LS that suits the majority of the class, so since I know most of them like to move then I prefer to use more active activities and stay away of the boring ones.

- *Do you think at this school teachers think and teach according to theories of learning styles?*

  No I think nobody really thinks about the theories because they want us to do many tasks so we don't or can't be involved in details of the theories, because generally we have to cover the school year plan within certain time. Unfortunately this is the Czech school system.

- *What makes it easy for you to meet the needs of all your students?*

  There is nobody who can make it easy for me. It is like "getting thrown with pieces of wood under your feet) ha ha ha."It is hard but I do my own preparation and I plan my lesson for me to enjoy and my kids to enjoy, and if I enjoy it then the kids enjoy it too"

- *Ok thank you very much for your opinion it is very important to me and it will really play an important role in my research so thanks a lot. I think it's important to know how things work in practice.*

APPENDIX 3 (d): the interview of the teacher of (G5)

<u>Interview of the 5th grade mainstream teacher</u>

- *How many students with special needs in your classroom?*

  Six students with learning and behaviour problems

- *Is that including students with dyslexia? Or how many students with dyslexia in these six?*

  4 with dyslexia.

- *And the four do they have behaviour problems as well or just dyslexia?*

  Yeah they have behaviour too.

- *Can you tell me please where do they sit? if you could show me on this diagram that I have made for your classroom?*

  Two work with assistance in the front and when its group work they work at the back of the class, I have one who have dysgraphia he is cleaver and understands the grammar but needs support In writing so he sits at the back without assistance just my support.

- *What about the two students setting at the back a girl and a boy do they have any SEN?*

  They are Russian so Czech is her second language.

- *How do you assess your students with dyslexia?*

  Well they get assessed from the special centre for special needs

- *Do you have any qualification in the field of special needs or dyslexia?*

  No I don't

- *Do you just teach Czech language or do you teach other subjects?*

  I teach all primary level subjects for the 5th class

- *How long you have been teaching?*

  One and a half year, I have not studies to be a teacher my specialist is ethnology it's a master programme in history of various ethnics. "But I love teachings it's like my hobby".

- *But do you find it easy to teach students of different needs like dyslexia and even with behavioural needs?*

  No it's very hard, very hard

- *Did you have any kind of training regarding teaching students of different needs?*

  No, No, the fact is that I gain my experience through practice and short courses.

- *Ok did you get any in-service training regarding dealing with students with dyslexia before?*

No, regarding dyslexia no, but well When I have student with SEN I send to the centre after I contact the parents regarding their child, beside some of my assistance provide some support for the child in the classroom. The cooperation between the centre and the school is very good.

- *Do you know anything about learning styles theories?*

What is that?

- *For example have you heard about the VAK theory which says that students have different preferred ways of learning some prefers visual others prefer kinaesthetic or audible? Or have you ever read about it?*

No I'm afraid my answer is no and plus I didn't get to see anyone who practice learning style theorise in action. But definitely I know it's important to know about it.

- *So how do you know or identify the needs and the learning styles of your dyslexia students?*

Well if the child makes a lot of mistakes, and when I joined the class last year I provided a lot of materials to the students, and I worked with the information provided to me about them as the students were being observed by the special teacher and I got the report from the school.

- *Do you ever ask your students what they like to use like materials in the classrooms?*

All students?

- *No, No, only your students with dyslexia?*

Well my aim is they work as easy as possible simply and to use play in teaching, I aim for the tasks to be short not too long, they do better in small groups compared with whole class

- *So what other things you change to help you students with dyslexia achieve better results?*

Give special different task, sometimes just part of the same job like the whole class or individual evaluation, sometimes change the materials or issue simplified tasks, so I take into consideration their disability while evaluating their work.

- *You mentioned that you use different material, so what kind of materials you use with them other than paper work?*

I prepare something myself which I take from internet or other practice books.

- *Have you ever used like video tapes or audio tapes with your students?*

Sometimes but it's for the whole class. Hhmmm I don't want my class to be splited or to exclude my dyslexic students but I put more pressure on the dyslexia students to catch up with the other students and to make the gapes smaller.

- *Do you ever ask the special teacher what kind of material you need to use?*

Yeah I do very often

- *Does the special teacher ever discuss with you about the different learning styles of students like the visual the auditory?*

Yeah we have meetings every week to discuss the needs of the students.

- *So do you ask you students about what they like to use generally like computers or any other materials?*

No I don't ask them much, they use computer at their homes a lot and I prefer classic reading and writing and games but using video hmmm I don't like it, and also there is no interactive board in every classroom

- *But do you think if you had interactive board in your classroom you will be better in dealing with students with dyslexia?*

I think not because of this amount of students who some have ADHD as well, it would be very hard to use computers in order to decide whose turn is it and only one student can work with computer of interactive board. As I have 8 hyperactive students

- *Do you think it's important to think about learning styles before you teach or what is the students learning styles?*

I think it's important and it pays back if you think beforehand.

- *So do you think you would like any training in this field if you had the chance?*
- Yes of course it would be good.
- *Ok since you have another class thanks a lot for taking part in this study*

Since the teacher was too busy we had to stop the interview and depending on her views it was thought that it was enough to know that her background on learning styles is limited so there was no need to ask any further questions.

APPENDIX 3 (e): the interview of the special teacher (SC)

- *Do you always work with your students outside the mainstream classroom? Or do you sometimes work with the mainstream teacher in the normal class?*

I never work with them inside the classroom, they are entitled to have one hour a week were I take them outside their classes. This is the style of the SEN system consultation at the school and during that hour I try to support. For example, to help with memory, concentration etc, so it's an hour which they can enjoy to just have me to meet their needs.

- *So how many students you have at one time?*

Normally I have one student, sometimes when students have same needs I can take 2 or 3 maximum 3 students as more than that is too much. We try to make group of 4 but it didn't work.

- *How many years of teaching experience do you have?*

Five months at this school, but I used to teach 3 years in regular classroom for the grades 1-5 then I went to university after university I worked as speech therapist during that time, I was originally as speech therapy then 5 years in preschool and as well I worked as assistance for children with disability.

- *Do you have any special qualification in special needs?*

Yes, I have speech therapy, psycholopidia, etopedie (treatment of behaviour difficulties)

- *Does that mean you have 5 months at this school but 8 years teaching experience in total?*

Yes around 8 years of work practice in total.

- *What subject do you provide support for your students? Can you please provide me with general idea about the support that you provide for your students?*

Mainly Czech language and maths, this is the subject that they need most support, but I don't teach them Czech language I teach them how to concentrate, because the main task is to teach them how to concentrate and cooperate and work during the lesson. I also try to teach them visual, audible perceiving

- *I have realised that you use a lot of visual, kinaesthetic and eye coordination activities during your lesson, why was it important for you to have all those activities during your lesson? Is it because it's a special class?*

  Yes all of them have dyslexia & dyspraxia and always they have disability in concentration and they are so active so that they can't concentrate every 10 minutes they have to change the activity

- *Do you think about the best way that your students can learn for examples do you think before your lesson about the certain students who might need visual, or audible or tactile activities?*

  yes definitely I think about it and I have to divide my students according to this LS because I can't have two students with different LS, sometimes I group them according to the same problem due to the large numbers of them it's possible to have such groups, but the hyperactive is big problem to all the different disability. Mainly I use with the younger ones I have more strictly dividing, according to LS and I sue with them a competition at the same time. For example one is working with computer and I work with another child thanks to the computer programmes that made it possible to help them both.

- *Ok very well since you do divided them into groups according to their learning styles, how do you provide support to them I mean do you teach all students with one specific learning styles like visual learners in one group?*

  It's both effect I have to take into consideration LS and age, I have one girl with older kids because she can handle it as she has same LS, but normally I take from same age because of knowledge level and same disability. Well, mainly the kids enjoy the fact that nothing disturb them and they know what to expect as we always have the same structure of lesson, so they know that we always start with the 'dum cek' the little house then we do paper work activity then there is always kinaesthetic activity, so within a month they learn the structures of my lesson and get use to it.

- *Since you do identify the learning styles of your students, how do you do that do you ask your students or do you use any other form of identification?*

  The first thing that normally happens so they get recommended to the SEN centre from grade1 such as in reading. Then the centre examine them to see their intellectual level and if they have learning difficulty and their level of hyperactivity. The centre makes report and recommendation for me and all teachers.

Ahhh then I have one kid alone then I decide which other kids I could have him together.

Hmmm our school also have advantage that the lady of the special centre come to see me every month, so any time she comes we discuss the students and she tells me what she has done with them and she always get in contact with me through email. She also check on me how do I carry the lessons as supervisor but this is not a standard in all Czech schools it's just because of the good cooperation between us and the centre and I have never seen it anywhere else, to me it's like a supervision.

- *So it means you only use observation, or do you ask your students what kind of activities such if they prefer visual or kinaesthetic or any other activities that they might like? Do you ever ask them?*

No all of them they like kinaesthetic activity, they always like activity to run and collect something, as such kids have to consume their energy. Actually I have never asked them if they like it or not (because you can just see what they like and figure it out). Well I see that they always prefer to do anything other than sitting on the chair, the problem is not that they don't like to learn but they just can't handle it while sitting. Ahhhh most of the children and I think I can say they 95% they can't sit more than 10 minutes and if they made to they will move any way. I have one student who just randomly stands up during the activity and work around so it's essential to join the motion into the lesson. This is my experience until now.

Also one thing I consider as important task is cooperation with parents especially with 1st cycle it can help to improve their ability because if they have home preparation it's like school preparation. After all family is the most important part to compensate the child's needs.

- *So do you discuss regularly with parents about their Childs' needs?*

It is also important that I speak with parents; I think I can't provide all the advice but of course different families have different responses to the support, and we have different cooperation, some meet once every two months or by email some months I prefer to meet frequently when they come to collect the child. Some parents they just come for half an hour and sometimes it's not just about their child but also about their own needs. Especially with the younger kids it is important to explain to the mother that they are not stupid, because when they have trouble with school or worst school results and then they are sent to the special centre, so all these results as difficult because of the school results. But our job is to explain that sometimes their intelligent

in on reaching average but just have some learning problems to be met. The point is to make parents know that their children are not deficit but with some needs.

- *Have you ever learnt or got training about any theory of learning styles?*
Yes I know it at university

- *Ok then do you use some formal ways of identifying your students learning styles like check lists, so have you ever used a check list to identify your students learning styles?*
No, no I didn't do anything like that here, because I only came 5 months ago and until now I have to adjust to the system but for next year I can start planning what I want to do or how because I was taking this from SEN system. Since, I came on the middle of the year. Even the approach of dividing the kids into LS groups it was here before, so I'm entitled to do it, as long as I have to help them until the end of the school year and this was an order from the school when I applied for this job.

- *So because you came on the mid of semester you could not use a check list?*
Well, ahhh because the SEN centre tells me about it, I work with the information I have, it's basically a report and recommendation it's not my competence to decide how to know their needs. So I receive report, I only choose my way of achieving the task.

- *Ok since you know about learning styles in your experience do you think it's important for teachers to be good teachers to know about learning styles or about its theories?*
First definitely yes, because I think this is my opinion each of us as a team has something to bring to the students its essential to come with general plan in how to help the child but one person can't achieve that alone, because it's an issue of team work and I send some of my students to SEN centre and sometimes I advice parents to take their students to 'basic studia' at the special centre because these activities when students can profit and it can enrich the teacher but my theory is that ' you have to be born as teacher' because the relationship to students and ability to function with the students and to have 'creativity is a gift that can't be learned anywhere' and 'I know many young people who join school system who just don't have it', because they think they will stand in front of the crowd and then go, this is not what teaching is about. "I think that teaching is a mission rather than a profession" I also think all of these things will help because the person or the teacher sees the children in different activity.

- *But do you think teachers the one you deal with if they have enough knowledge in how to deal with the different learning style of the students who need extra support?*

I'm not sure, I don't know but the school is aimed to further education their teacher but if they know about LS theory I don't know because of the short period, we did have workshops but within these we didn't have any about (LS) theories, but may be in the future years.

- *Do you think after you will be here for long would you talk to teachers about learning styles?*

Definitely it already exist right now, when I talk to teachers and assistance when I tell them which way or style is best for them but I can't teach it to the teachers. My task is to teach the children but definitely I try hard to have good cooperation with the teachers and I ask them about how the students doing in their lessons and what else we can do for them and their parents, but I just think that the school system here is totally different and good teachers know this, as we have extra quality. Hmmm, it has come to my mind that at least once every half a year there is a meeting of the integrated kids and all teachers they meet two times in the whole year considering specific child and to evaluate the IEP.

Plus, I talk to them so I tell them if he needs kinaesthetic activity, but not just disability.

- *Ok thanks a lot for your time I know you have class now*

Yeah but please if you need any extra information you can always come and ask me again and I can find someone to translator for us.

- *Thanks a lot for your cooperation it means a lot for me and thanks for everything.*

APPENDIX 3 (f): the interview of psychologist from the Educational Psychological counselling Centre

- *Can you please give me general idea about your work and your cooperation with this school?*

I'm special teacher I Work as behaviour specialist or with students who have any other learning difficulties, so I'm cooperating with the school on examining the kids and on the assessment of the kids. And I come to the school regularly and I have regular sessions with the students. And according to the common needs I cooperate with the director, with the special counsellor, with the local special teacher or with the class teacher on the various cases.

- *So at The centre that you work at is it especially for all SEN Students or only for dyslexia?*

it correlates with the focus of the centre I'm representing the PPP (Educational Psychological counselling Centre) and we focus on the kids with special learning needs such as (dyslexia, dysgraphia, dyscalculia) so not only dyslexia but all kind of leaning needs and we work with behavioural difficulties.

- *Do you have any idea about the numbers of students with dyslexia that you support at this school?*

No I don't really know the exact numbers because I support a lot of schools not only this school that I work with,

- *Does your centre have an internet web site?*

www.ppppraha.cz

- *How many years you have been supporting this school?*

Two years, it happened in a way that this special centre now concludes three parts of Prague, they used to work only with Prague 2 but now we have Prague 1,2 & >>>

- *& 4?*

Yeah

- *ok*

So that's why I came to this region two years ago.

- *You mentioned that you work at the field of assessment, what kind of assessment you use to assess students with dyslexia?*

I'm using special testing system and scale from the pedagogical

- *So do you have to observe the students in their normal classrooms and accordingly assess the student? I just want to get the general idea about the assessment procedure?*

The procedure is that the class teacher has the first suspicion, then she talks to the special teacher of the school, and the special teacher of the school observes the kids, then she talks to parents, and she directs them to go to the special centre where they take the examination, and then the special centre refers back to school with like a school questionnaire and if necessary the psychologist come to see the kid at his classroom but it's not a rule.

- *So just to clarify do you ask the teacher to use any list of observation at any stage of the assessment?*

The special teacher?

- *No the normal classroom teacher?*

No she just have to bring the first concern

- *Just the concern not formal observation? ok , ok*

Or it can also be parents who bring the first concern, so mainstream teacher or parents.

- *So now I would like to go back to my focus of my research which is regarding learning styles, when you deal with teachers in the classroom do you specify to them what kind of learning styles students they have like visual, auditory or kinaesthetic or you just specify the needs of the students?.*

Do you mean after examining?

- *Yes after examining the students.*

She showed a report and added this is a report its quite a big report, it's pretty complex, which tells how often does the kid needs to see the local spacial teacher and what are the needs of the students, and what needs to be used, Hmmmm, well all that is part of the report, and its part of the report like analysing what kind of learning styles the kid prefer

- *When you analyse you also mentioned what kind of materials the teachers suppose to use according to the learning styles visual, or audible or kinaesthetic? Or do you leave that to the teacher to decide?*

It is part of the report, so I tell them this student has these learning styles so you better use this type of materials, so we do recommend to the mainstream teachers.

- *Ok, basically you come here very often, how do you make sure that the teachers accommodate for the students learning styles?*

I consult with the mainstream teacher so I talk to them regularly, and the special teacher of the school that's one thing so it's like personal meetings and another point is that the report has only a limited validity so it's not valid for ever,Hmmm But usually with the small kids 1st and 2nd grade for one year every year they have to come to do the analyse again, and with the older kids its usually up to two years, Plus the kids that have serious trouble they go for the treatment to the centre, so I meet the kids there not only via his teachers so I talk to parents and the kid at the centre.

- *so if we could talk about the IEP*

She interrupters saying: This report which is based on it the teachers make their plan, so the school makes the programme according to my report.

- *Ok but, since IEP or your report can change how do you make sure that teachers change their strategies according to the child's needs? For example do you provide training for teachers?*

This matter is the responsibility of the headmaster but because she is the one who organise for workshops and courses for her teachers for example I conducted some lectures for local teachers which gives the mainstream teachers some background, but if they still don't know what or how to deal with one situation they talk to the counsellor of the school or special teacher of the school, so there are always ways of getting information. Plus as a psychologist I'm always available for consultation at anytime through phone, email as I have all the reports of the students at the centre so even if I can't remember all children I can still give some advice even from distance

- *Regarding the courses or training that you provide to teachers at this school is it about learning styles? Or is it just about generally how to deal with students with special needs or dyslexia?*

The one that I provided myself to this school?

- *Yes*

Well again I provide whatever the headmaster advice of, so if the headmaster thinks that her teachers need training in a certain field she orders the workshop or discussion session from us.

- *But have you ever thought at certain point at this school some teachers need to know about how to deal with the different learning styles like: the visual, audible or kinaesthetic learning styles?*

I actually didn't have this idea that they will specifically need this workshop, but I do know that some teachers need to go to training in various fields not only learning styles, because the school have young teachers and new teachers so that not all of them had covered all the lessons and workshops that I have provided.

- *Is it possible that if you covered the field of learning styles you can cover the needs of the other field so basically a general workshop in students needs can lead to learning styles, or other way round? What do you think?*

Of course our workshops are not only in any topic, but it's always a workshop on the field of education or behaviour needs, also we can cover the field of any special needs , because we are a team of specialists,,, yeah except this special centre is for learning difficulties in Czech republic we have another educational centre SPC for those who have other types of disability.

- *What kind of disability?*
- They work with audio or hearing problems, visual or sight or mental disability
- *So I just want to clarify, in your opinion what is the best way to handle students with dyslexia is it to know their preferred learning styles or is it enough to know just their needs? Which is more important in your opinion?*

With the smaller kids who have dyslexia the idea is that they need to revise, practice and re-learn all the sentences and practice all the senses, so the approach is like multisensory so they have to work in a progress of all of them, we have to re-educate those are not suppressed or limited.

The point is with the younger kids that we don't want to compensate all the senses just by replacing using the one which is most convenient for the kid, the point is that we need to re-educate all the senses and you know bring them in to function in the best possible way .

- *If I can go back to the issue of training, does it mean from what you said now that you give training for teachers here about the multi-sensory approach to accommodate for the needs of their students with dyslexia?*

Ok if you want to get back to your previous question, for older students for example for those who are 13+ years including high school students, we focus in how to learn and how to bring the information into them, they learn how to be successful students

and this point the special learning style now is preferred, so then they probably decided which learning style is the best for them to keep and retain the information.

- *That's only for age 13+ year?*

   For the grades of 8 & 9 grade and of course according to the needs and the individuals but the division is that for youth or younger kids like in the first cycle is to use different sights.

- *Ok, just to confirm for the younger ones you prefer to use multisensory and that's for grade 1-5? After that you <<<<interrupted*

   It's not that strict as I said it's according to individual

- *Yeah ok I understand that but since my research is about the upper primary level grade 3-5 and I'm really interested on how it works for students who are in grade 5, in other words if you advice to educate students of grade 5 in how to use their preferred learning styles?*

   Mmmm, No, students in grade 5 they don't learn it so much yet, but at this stage we do try to find their learning style where their disability does not interfere so much with the learning styles.

- *Ok, what do you think the best way for schools or teachers could use to accommodate for the needs of students with dyslexia?*

   Do you mean you want specific steps on how to support students with dyslexia?

- *Yeah, I mean what teachers should provide for their students with dyslexia and what schools should provide for the students with dyslexia? Thinking generally or regarding learning styles?*

   Hmmmm, The programme would normally contain ,, ahhh the best thing is the connection with the school with the special teacher plus the parents should come to the centre where they will be explained to them well how and what to do with the kid at home and ideally it would be better to have fewer children with SEN at the classrooms, so that the teacher can spend more time with the dyslectic child, but there is a programme for the stronger affected dyslectic kids, they have special classrooms that have maximum 12 students and it caters usually for children with combined disabilities in this classroom.

- *Is that the same as special class in this school the one I observed with only 3 students? Or is it different classroom?*

   No No, this is an extra group for extra activity. It's a class that is held for the whole day of the school where they spend with one teacher all the day doing all the different

school activities and all the students have dyslexia or any other combination of difficulties. So they also have (it's not in this school) in other school they have class of only behaviour difficulties, but normally it comes together hand in hand behaviour with dyslexia.

- *Ok, do you think later on in future you would think of providing training for teachers of this school in the field of learning styles?*

Ah , yeas but the initiative has to come from the headmaster

- Ok

We don't only come to organise sessions at schools, but as well we organise some courses in our psychological centre, but the lecture on learning styles is automatically integrated in the schedule of our workshops normally.

- *Ok, But I have observed not only at this school, but at different schools they have different resources in the different classrooms, so do you think that materials and resources also plays a role in helping teachers to meet the needs of students with dyslexia?*

Definitely they play important role that's why they are made to help the teachers, there are also special 'dys' centres and its centres where they work with the kids and also sales for schools and families some materials, so this is where all the resources meet because all providers provides to this centre, so a lot of materials there and there is a specialists who can provide some advice on the materials too.

- *O 'right, thanks, is it possible to have copy of the report of assessment that is provided by you to teachers?*

Yeah sure

- *Thanks a lot for your time and your information.*

Please do visit me at the centre it will be good for you to see more about how we accommodate for the needs of our students.

- *Yeah for sure I will be coming and I will check for your website if you could please provide me with your address.*

Ok here it is >>>>>>>

APPENDIX 4: translated copy of the report provided to classroom teachers from the special centre regarding their students' needs.

GROUNDWORK FOR INDIVIDUAL EDUCATION PLAN FROM

PEDAGOGICKO-PSYCHOLOGICKÁ PORADNA

(EDUCATIONAL-PSYCHOLOGICAL COUNSELLING CENTRE)

We recommend correction of Specific Learning Dysfunctions in following fields:

- acoustic distinction (of hard / soft sounds, hiss assimilation, anagrams)
- acoustic analysis and synthesis (border line of a sentence, a word, a syllable, a sound)
- auditory memory
- rhytmical reproduction – lengths
- visual distinction
- visual memory
- visual motorics – „hand – eye" coordination
- rough motorics – motoric coordination
- fine motorics, grapho-motorics, grip
- hand loosening training
- right - left orientation
- space orientation
- corporal scheme orientation
- attention consideration
- language skills
- other ....

We recommend following general methods and approaches for working with the pupil:

- prolonged explanation
- prolonged practice
- oral practice
- preferring of oral testing
- possibility to reduce extent of the curriculum
- reduction of "time-limited" tasks (e.g. the 5minutes test)
- preferring multiple choice tests
- practicing how to work with textbook
- controlling correct understanding the task instructions
- respecting individual tempo of the pupil
- appreciating pupil's endeavour and interest
- frequent positive feed back
- multisensorial approach
- other ....

<u>We recommend following specific methods for working with the pupil in Czech language:</u>

- prolonged syllabifying
- word by word reading
- content unit reading
- reading with "little window" (with a bookmark, with an auxiliary chart)
- respecting current level of reading skills
- pair reading
- observation (perception, remarks)
- text orientation
- practicing comprehensive reading
- tracing (shapes of letters, syllables, words)
- alternative forms of dictations (e.g. dictation with exaggerated pronunciation)
- writing into auxiliary lines
- writing on a bigger-sized paper
- using model letters for writing
- written form of capital script
- writing diacritical marks simultaneously with the letters
- filling in grammar features into an exercise
- using charts, structural abstracts, rule summaries
- using computer with spelling correction
- compositions (prefer content, with teacher's help, orally)
- other ....

<u>For teaching scientific subjects we recommend:</u>

- enable alternative forms of making notes (replace hand written notes by a printout, shorter records, taking copies from classmate's notes)
- more frequent use of an opinion (drafts, time axis, graphs, schemes, summaries, pictures, etc.)
- individual testing (form, extent, after an agreement with the pupil)
- reduce mechanical memorizing of facts without wider context (e.g. memorizing names, years of events, definitions, listings, etc.)
- continuous verification of correct understanding the task instructions, help with the first steps
- respect right-left and space orientation dysfunction, disadvantageous laterality form dysfunction (maps, blind maps, atlases, time axis, charts, encyclopedias, graphs, schemes, etc.)
- do not evaluate mistakes caused by misreading or by incorrect text comprehension
- evaluate only content perspective of the task (do not evaluate stylistic, grammatical or specific mistakes)
- evaluate partial steps of task solving processes, not only the result, evaluate a well done fraction of the task as well
- other ....

<u>For teaching mainly educational subjects we recommend:</u>

- mainly to develop, to be tolerant in evaluation, to focus on positive feeling
- focus on fields, where the child is successful (creativity, fantasy, originality, endeavour)
- respect the dysfunction displays specifically in ....
- other...

<u>We recommend to take into consideration also:</u>

- lower quality of graphic display, notebook arrangement)
- individual tempo (too slow / bustling)
- pronunciation and speech dysfunctions
- problems caused by the disadvantageous laterality type
- concentration dysfunction
- memory dysfunction
- psycho-motoric restlessness and impulsivity
- oscillation and fluctuation of efficiency

APPENDIX 5: copy of the letter of explanation for the school

Copy of the email sent to the school

Dear >>>>>,

I appreciate your acceptance to agree to participate in my research as a part of my master degree in special needs at Charles University. Please find the enclosed outline of my aims of my research at your school and just to confirm with you that all the information that I will require from this study as well as your school identity will be confidential.

My research will be based on:

(How Czech language teachers in Prague use learning styles to support students with dyslexia in primary mainstream schools?)

The following instruments will be used:

- Questionnaires for language teachers
- Interview (head teacher, 2 teachers , 1 support teacher)
- Classroom observation of the 3 interviewed teachers.
- Five visits:

1st visit	Meeting the head teacher & discussing the topic Interview the head teacher about the school policy of students with dyslexia and learning styles
2nd visit	Distribute questionnaire+ collecting questionnaire
3rd visit	Observation of classroom + interview
4th visit	Observation of classroom+ interview
5th visit	Observation of class room+ interview

- If it is possible to observe and interview both two teachers in one day then I can change the number of visits to (depending on school's time availability)
- If it's possible I would like to start visiting the school straight after 15/4
- I might have to use video for the observation if it's possible.

Please let me know if my plans do suit you and thanks again for your help and participation.
Thank you,
Munira Al-Adawi